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CATALOGUE
OF THE
PATHOLOGICAL MUSEUM
OF THE
PENNSYLVANIA HOSPITAL.

A1.T. 1869.1

HARVARD UNIVERSITY.



Harvard Medical School,

Boylston St., Boston.

From

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with compliments of
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DESCRIPTIVE CATALOGUE



OF THE

PATHOLOGICAL MUSEUM

OF THE

PENNSYLVANIA HOSPITAL.

Mass. Medical College

BY

WILLIAM PEPPER, M.D.,

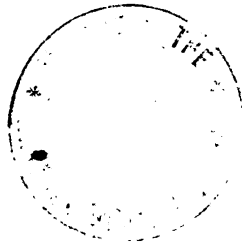
PHYSICIAN TO THE PHILADELPHIA HOSPITAL; CURATOR AND PATHOLOGIST TO THE PENNSYLVANIA
HOSPITAL; LECTURER ON MORBID ANATOMY AT THE UNIVERSITY OF PENNSYLVANIA;
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1869.



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P R E F A C E.

It appears to have always been the intention of the Managers and Physicians of the Pennsylvania Hospital to provide for the establishment of an Anatomical and Pathological Museum in connection with the institution. So long ago as 1762, the foundation of a collection was laid by the gift, from Dr. John Fothergill (whose untiring interest and liberality in behalf of the Hospital deserve every acknowledgment), of 18 different views of anatomical structure, drawn in colored crayons by Rymadike and framed, 3 large plaster casts, and a case containing a skeleton.

The value of these, and more especially of the drawings—which, indeed, compare favorably with any anatomical illustrations of the present day—was very considerable, being estimated in the schedule of the stock of the Hospital at £350. Their practical value was also very great at the time, as they served as illustrations for courses of lectures on anatomy, delivered by Dr. Shippen in 1762 and 1763.

Additions were made to the Museum from this time onward, but at so slow a rate, that in the first catalogue, published in 1806, there are included but 161 preparations, in addition to the paintings and casts received from Dr. Fothergill. The great majority of these specimens were due to the skill and ingenuity of Dr. Chovet, whose wax models and injections were unrivalled at the time.

The interest in the collection appears to have diminished after this, until in 1824 the Managers decided to remove it from the Hospital grounds, and accordingly gave to the Wistar and Horner Museum of the University of Pennsylvania all the specimens and preparations, with the exception of the paintings and casts donated by Dr. Fothergill, which were, however, loaned to the Trustees of the University and deposited in the same Museum.

In 1860, however, the Managers, realizing the essential importance of an Anatomical and Pathological Museum in connection with an institution

where, as in the Pennsylvania Hospital, large numbers of medical students receive clinical instruction, again determined to provide for the formation of such a collection. With this view, they appointed Dr. Thomas G. Morton Curator and Pathologist to the Hospital, and adopted a series of rules, framed by him, for the regulation and development of the Museum. Since that time nearly 550 valuable pathological specimens have been collected, principally from the practice of the Hospital, and prepared in the most appropriate and demonstrative way. Of these, nearly one-half were obtained and prepared by Dr. Morton, who held the office of Curator for three years, until elected one of the Attending Surgeons of the Hospital, and to whose zealous interest in pathology the present collection may be truly said to owe its existence.

During the past year also the drawings and casts presented by Dr. Fothergill have been removed from the Wistar and Horner Museum, and now form objects of conspicuous interest in the Hospital Museum.

The collection is at present placed in a spacious building, adjacent to the Clinical Amphitheatre of the Hospital, where it is readily accessible to all who wish to examine and study it.

The following are the rules adopted by the Board of Managers for its regulation :—

1. All specimens, normal or pathological, occurring in the medical or surgical practice of the Hospital, from post-mortem examination or otherwise, which may be deemed interesting or worthy of preservation by the Curator, shall be considered the property of the Museum of the Hospital (stone from the bladder excepted, when claimed by the operator).

2. Contributions from all sources shall be solicited and received, and such specimens placed in the Museum, either as donations or on deposit, with a label affixed, bearing the name of the donor or depositor.

3. The Curator shall have entire charge of all the specimens belonging to or deposited in the Museum, shall prepare them or have them prepared in a suitable manner, and shall be responsible for the same.

4. He shall keep a register in which the history of all the specimens shall be kept, together with a catalogue of the same.

5. He shall also have authority to loan specimens to the officers of the Hospital, for the illustration of lectures elsewhere, or for other purposes, provided that the borrower shall sign a receipt for the specimens removed, in a book kept by the Curator for the purpose, making himself responsible

for the safe return of said specimens, and the full repair of all injuries incurred by them.

6. The Resident Physicians shall notify the Curator of every autopsy, and shall keep, as accurately as possible, a history of each specimen occurring in their respective wards, which shall be given to the Curator for registry.

7. The Steward shall furnish the Curator with such necessary implements from time to time as may be required for the Museum; and he shall be authorized to pay all bills consequent upon the formation of the Museum, which have been approved by the Chairman of the Library Committee. He shall also allow an assistant to aid the Curator at such times as may be required.

The following catalogue is based upon one written by Dr. Morton, which contained the descriptions of about three hundred specimens, each of which has, however, been carefully re-examined and more fully described. The system of classification and numeration will be seen to coincide almost entirely with that used in the catalogue of Guy's Hospital Museum. The name of the donor or depositor is affixed to the description of each specimen which has not been obtained from the practice of the Hospital; and whenever an account of any specimen has been elsewhere published, a full reference is made to the author and the place of publication.

My thanks are due to Dr. Charles Ritz, at present Resident Physician in the Hospital, for his kind assistance, which has enabled this catalogue to be completed several months earlier than would otherwise have been possible.

CONTENTS.

	PAGES
OSSEOUS SYSTEM	1 to 49
Joints, Tendons, Bursæ, &c.	46 to 49
NERVOUS SYSTEM AND ORGANS OF SPECIAL SENSE	50 to 57
Spinal Cord	50 to 51
Brain and Organs of Special Sense	51 to 52
Skin, including Superficial Tumors	53 to 57
DIGESTIVE SYSTEM	58 to 77
Alimentary Canal	58 to 71
Liver and Bile-Ducts	71 to 74
Pancreas	74
Spleen	74 to 75
Peritoneum	75 to 77
RESPIRATORY SYSTEM	78 to 83
Larynx, Trachea, and Bronchial Tubes	78 to 79
Lung	80 to 81
Pleura	82 to 83
CIRCULATORY SYSTEM	84 to 96
Heart	84 to 89
Pericardium	89
Aorta and Arteries	89 to 94
Veins	94
Lymphatic Glands	95 to 96
GENITO-URINARY SYSTEM	97 to 119
Kidney	97 to 102
Urinary Calculi	102 to 104
Urinary Bladder	104 to 105
Male Genital Organs	105 to 111
Female Genital Organs	111 to 118
Mammary Glands	118 to 119
Ovum	119
APPENDIX.	

DESCRIPTIVE CATALOGUE.

OSSEOUS SYSTEM.

1000.—Articulated Skeleton.

The skeleton presents a perforate sternum, and an united fracture of the left fibula in the upper third.

1000^s.—Articulated Skeleton, showing Antero-Posterior Curvature of the Spine.

The cartilage between the eighth and ninth dorsal vertebræ has entirely disappeared, and there is complete fusion of their bodies so as to form a mass of bone like a truncated pyramid, with the base posteriorly. The anterior surface is not so wide as the body of either of the adjoining vertebræ; it is quite smooth and compact. There is some formation of osteophytes, springing from the corresponding ribs and from the lateral processes of the vertebræ.

The curvature resulting is so great that the lower ribs reach the crests of the ilia. There is slight compensatory anterior curvature of the lumbar portion, and the posterior part of the pelvis is depressed.

Case of Boyle, a miner, admitted to the Pennsylvania Hospital with comminuted fracture of left clavicle (not preserved in the skeleton) and laceration of lung, which led to development of fatal empyema.

1001.—Sacrum, showing Spina Bifida.

The anterior portions of the sacral vertebræ are well developed; but posteriorly the half-arches are deficient from the second to the last, leaving an opening fully one inch wide and two inches long. The sac of the spina bifida is rather a small one, and is composed of the arachnoid and dura mater. Some nerves of the cauda equina are seen terminating upon the inner surface of the sac.

Presented by Dr. E. LIVEZEY.

1001^s.—Dorsal Vertebræ, showing Spina Bifida.

There is a deficiency of the spinous processes of the ninth and tenth dorsal vertebræ. The dura mater is adherent around this opening, and

continuous over the sac of the spina bifida. The spinal cord was quite normal, none of its fibres entering the sac.

There was thickening and opacity of the membranes of the brain, and distension of the lateral ventricles, each holding three fluidounces of serum.

Case of Benjamin Miller, æt. 32, admitted to the Pennsylvania Hospital August 17, 1866. He soon became profoundly unconscious, without any paralytic symptoms, and died on the fourth day.

There was an oval tumor, three and a half inches long, in the lower part of the dorsal region; and it was learned that whenever this tumor was pressed upon, he suffered violent headache, with temporary delirium.

Dr. W. PEPPER, Proc. Path. Soc. of Phila., Nov. 14, 1866.

1002.—The Dorsal and Lumbar Vertebrae, with the Ribs, affected with marked Lateral Curvature.

The specimen was removed from the body of an organ-grinder who died from a railroad injury. The curve, the convexity of which is to the right, occupies the entire dorsal portion of the column. The distance from a line dropped from the first dorsal vertebra to the deepest point of the concavity of the curve, the body of the ninth dorsal vertebra, is $4\frac{3}{4}$ inches. The cavity of the thorax upon the right side is much diminished in size, especially at its superior part; the anterior extremity of the first rib being distant only half an inch from the body of the fifth dorsal vertebra, to which it corresponds; and the third rib, at junction of its middle and anterior third, distant only seven-eighths of an inch from the body of the seventh dorsal vertebra. Upon the left side the thoracic cavity is, at least comparatively, much larger, the third rib, at the same point, being distant six inches from the body of the seventh vertebra. The lumbar portion of the column presents indications of an incipient compensatory curve.

There is no disease, apparently, of the substance of the bones.

Presented by Dr. T. G. MORTON.

1003.—Three Lumbar Vertebrae, showing Spongy Exostoses on the Anterior Surface of their Bodies.

The upper surface of one of them presents evidences of carious ulceration.

Presented by Dr. T. G. MORTON.

1005.—The Spinal Column and Ribs, affected with Antero-Posterior Curvature, the result of Scrofulous Disease.

The specimen was removed from the body of a child who had suffered for a long time with scrofulous disease. The curvature is seated in the lower dorsal region, the bodies of the eighth, ninth, tenth, eleventh, and twelfth dorsal and first lumbar vertebrae having almost entirely disappeared; but, moreover, there is extensive disease of the bodies of all the upper dorsal vertebrae (above the eighth), of the lower three cervical, and of the second lumbar vertebra. The intervertebral cartilages between the third

lumbar and fifth cervical vertebræ have all disappeared. The diseased vertebræ present the coarsely cellular, honeycombed appearance peculiar to carious disease. There are also a few points on the half-arches of the dorsal vertebræ which seem to have been diseased. The eleventh right rib is a mere spine, one inch in length, its surface irregular, as though carious; the eleventh left rib, on the other hand, is five and a half inches long, and its surface smooth and healthy.

The angle of the curvature is slightly less than ninety degrees.

The thorax is depressed, the end of the ensiform cartilage being on a level with the body of the last lumbar vertebra. Its antero-posterior diameter is, however, increased, the distance from the junction of the second and third pieces of sternum to the spine, at point of curvature, being about six inches. The inferior part of sternum projects considerably, the plane of the sternum being parallel to that of the lumbar vertebræ.

From a child who died in the Children's Hospital.

Deposited by Dr. BACHE.

1005^e.—Part of the Dorsal and Lumbar Portions of the Spine, showing Antero-Posterior Curvature resulting from Scrofulous Disease.

The vertebræ composing the specimen are the six lower dorsal and the five lumbar. The curve corresponds to the last two dorsal and first lumbar vertebræ, and the bodies of these three have almost entirely disappeared, the coossification of what remains of them forming a somewhat triangular mass of bone, protecting the spinal canal. There has, however, been an opening formed into the spinal canal, about a third of an inch in diameter, corresponding to the intervertebral space between the tenth and eleventh dorsal vertebræ. The curvature, however, forming an angle of about ninety degrees or less, the lower surface of the tenth dorsal vertebra to a great extent supplies the deficiency in the anterior wall of the canal at this point. The calibre of the canal, though forming a right angle, and deficient at one point, is well preserved.

The bodies of the eighth, ninth, and tenth dorsal vertebræ are coossified; the bodies of the eleventh and twelfth dorsal (which can scarcely be detected), and of the first, second, and third lumbar vertebræ, are also coossified, forming a triangular mass as above described, a section of which shows no trace of the original intervertebral spaces; and, finally, the bodies of the fourth and fifth lumbar vertebræ are coossified, and the line of union has also completely disappeared.

The three masses thus formed also present coossification of their articular and spinous processes, and the articular facets for ribs on the lower dorsal vertebræ are confused and blended.

The upper of these masses is separate; but the second of them, formed of

two dorsal and three lumbar vertebræ, is joined at one point with the fourth lumbar vertebral body. There is no lateral curvature of the spine present.

The specimen was removed from the body of a young man who died in the Pennsylvania Hospital with abscess of brain.

No disease of any other organs was found, and there is no record of any paralysis.

1006.—The Lumbar Vertebræ and Sacrum, after Lumbar and Psoas Abscess.

The disease has involved the last four lumbar and first two sacral vertebræ, and has produced an uneven, porous, finely honeycombed appearance of the anterior surface of their bodies, extending to a very small depth into their substance, and attended with quite free formation of osteophytes (of the villous and splintered varieties chiefly), especially upon the fourth, fifth, and sixth lumbar vertebræ. The intervertebral cartilages were removed by maceration, so that it is impossible to say whether or no they were affected; but the articulating surfaces of the vertebral bodies are smooth and healthy.

The specimen was removed from the body of a colored sailor who died in the Pennsylvania Hospital from phthisis, apparently induced by the exhausting drain from a lumbar and psoas abscess, with which he had suffered for many months. These abscesses developed themselves soon after, and apparently in consequence of, a blow with a capstan bar across the loins, which he received one year before death from a drunken mate.

1006^s.—Caries of Lumbar and Sacral Vertebræ.

The two last lumbar vertebræ and the anterior face of the upper part of the sacrum are diseased, and the intervertebral cartilage between the fourth and fifth lumbar vertebræ is completely destroyed. The anterior surface of the bodies of these vertebræ is irregular and porous, and presents large spiculated and laminated osteophytes. The surface of the sacrum is less involved, and presents merely an eroded appearance.

Case of Stephen Reed, æt. 44, admitted to Pennsylvania Hospital August 6, 1866. No reliable history could be obtained. He was emaciated and exhausted; soon after a large abscess opened in right lumbar region, and one on the outer surface of the left thigh, and he died one month after admission.

The lungs were studded with tubercles. There was a large abscess in each lumbar region, on the right side extending from the last dorsal vertebra to Poupart's ligament; on the left side, burrowing under the ligament and around to outer part of the thigh.

The cæcum and ascending colon on the right side, and the descending colon on the left formed the anterior wall of these abscesses; in one point, the cæcum was almost perforated. There was also a small abscess surrounding the vermiform appendix.

1008.—Cervical Vertebræ, showing Melanotic Deposit.

The disease involved the transverse process of the atlas, and the transverse and odontoid processes and body of the axis.

Presented by Dr. A. HEWSON.

1009.—Cervical and Upper Dorsal Vertebrae, showing results of Fracture and Dislocation.

The body of the sixth cervical vertebra has been torn from its connection with the seventh, and its transverse and articulating processes on the right side fractured. The upper six cervical vertebrae are then so forcibly rotated to the *right* that their spinous processes lie almost in line with the *left* transverse processes of the seventh cervical and the upper dorsal vertebrae, and the body of the sixth is forced against the right lamina and articulating processes of the seventh vertebra. This extreme dislocation has produced lateral obliquity of the atlas, which is elevated from its articulation with the axis on the left side, and forced down against it upon the right side.

The right lateral portion of the cord is lacerated on a level of the fifth cervical vertebra, and the whole cord is intensely compressed between the sixth and seventh vertebrae.

Pennsylvania Hospital.

1009^s.—Fracture of Cervical Vertebrae, with Anterior Dislocation.

The left articulating process of the sixth vertebra is broken off, allowing anterior dislocation of the fifth, compressing the spinal cord. There is also a comminuted fracture of the atlas, the lateral masses being separated, and the arches broken in two places; there was no marked laceration or compression of the cord at this point.

Case of Mary Nicholson, æt. 19, admitted to the Pennsylvania Hospital July 5, 1866. She was a large, heavily-built girl, and had fallen, twenty-four hours previously, from a small tree, the fall not exceeding ten feet. There was paralysis of motion and sensation from clavicles downwards; mind clear; pulse small and frequent; respirations thirty-two in minute, and diaphragmatic; cheeks flushed and very hot; temperature in left axilla 108.5°; no involuntary discharges. Death occurred suddenly, while changing her position, twenty-four and a half hours after injury.

Dr. W. PEPPER, Proc. Path. Soc., Sept. 26, 1866.

1010.—The Cervical Vertebrae, showing Fracture.

The left transverse process of the fifth vertebra is fractured. The spinous process of the sixth is fractured, and again separated on both sides close to the inferior articulating processes, and forced down upon the seventh vertebra. The body of the sixth is broken through vertically, and the bodies of the sixth and seventh vertebrae mashed together.

The specimen was removed from the body of a man, æt. 23, who fell into the hold of a vessel, striking the back of his head. He was paralyzed from the arms down, and died from suffocation on the eleventh day.

Pennsylvania Hospital.

1010^s.—The Cervical Vertebrae, showing Fracture.

The bridge connecting the right spinous and oblique processes of the fourth vertebra is fractured and a piece splintered off, and the body is also partially fractured in a vertical direction.

The bridge of the fifth is broken in like manner, and the body split through vertically. The right half of this vertebra was dislocated anteriorly, its articulating process slipping over that of the sixth. The body of the sixth vertebra was also split through vertically near the median line.

The spinal cord was pressed upon in several places, and numerous clots were found in the canal.

The specimen was removed from the body of a man, *æt.* 19, who had fallen into the hold of a vessel, striking the back of his head and neck. He was paralyzed from the shoulders down, but remained perfectly conscious until a short time previous to his death, which occurred on the tenth day.

Pennsylvania Hospital. Presented by Dr. T. G. MORRISON.

1011.—Lumbar Vertebrae, showing a Fracture through the Body of the Third, about its Middle, parallel to the Intervertebral Substance.

There is, apparently, no displacement of the fragments.

Pennsylvania Hospital. Presented by Dr. T. G. MORRISON.

1011².—Two Lumbar Vertebrae (Second and Third?), showing Fracture.

The upper one presents a comminuted fracture of the body, the general line of fracture being vertical and antero-posterior. The bridge of bone connecting the articular processes on the left side is also fractured.

The other vertebra presents a transverse fracture of its body just anterior to the origin of the pedicles of the articulating processes, and, in addition, a partial horizontal fracture through the middle of the body.

The specimen was removed from the body of a man who fell from a third-story window, alighting on his feet. He produced a compound fracture of both ankles, in addition to the injury to the vertebrae.

Pennsylvania Hospital.

1015.—Sternum, showing Cancerous Tumors attached to Posterior Surface of the Manubrium.

These masses, which are three or four in number and about one inch in diameter, are very hard and nodulated, and have much the appearance of cancerous mediastinal glands.

The specimen was removed from a woman, *æt.* 45, who died with cancer of the oesophagus and trachea, and whose history is given in full in connection with Spec. 1285 (*Digestive System*).

Pennsylvania Hospital.

1017.—Sternum, showing Recent Fracture.

The sternum is broken transversely, a few lines below the junction of its first and second pieces, and the upper fragment is dislocated posteriorly.

The specimen was removed from the body of a man, *æt.* 37, who died from a com-

plication of injuries, produced in this way: the man was riding on the front of a hand-car, such as is used by workmen on railways, and by a sudden jerk was thrown off, the wheels passing over his chest.

Pennsylvania Hospital.

1017^s.—Sternum, showing Comminuted Fracture involving First and Second Bones, and attended with much Displacement of the Fragments.

Case of John Wilkinson, æt. 40, admitted to the Pennsylvania Hospital July 15, 1886. A heavy train of cars had passed over his body while lying intoxicated on the track. The right arm and foot were crushed off; there was a compound comminuted fracture of the inferior maxilla (see Spec. 1053); and, finally, all the ribs of the right side, together with the sternum, were fractured. The sternum also shows a perforation near the lower portion of the gladiolus, about a quarter of an inch in diameter, and the second and third bones are coossified.

1018.—Bifid Rib.

Caused by bifurcation of the fourth rib on the left side, about two and a half inches from the sternum. The branches are attached to the sternum by a common costal cartilage.

Removed from the body of a male adult who died in the Pennsylvania Hospital of pulmonary tuberculosis. No other anomalies found.

1020.—Ribs, showing Tuberculous Caries.

There is a large deposit of cheesy tuberculous matter on the inner surface of the ribs (seventh and eighth?), about their middle, forming a tumor the size of an English walnut. In the process of softening the ribs have become involved, and one of them entirely cut through by the carious ulceration, so that the softened tuberculous matter was discharging externally through it.

Pennsylvania Hospital.

1021.—Ribs, showing Recent Fracture.

The four ribs are broken almost directly transversely, and there is some overlapping and angular displacement of the fragments, lacerating the fibres of the intercostal muscles.

The specimen was removed from the body of a man who was run over by a heavy wagon, and received a rupture of the liver, from which he died.

Pennsylvania Hospital.

1021^s.—Ribs, showing Recent Fracture.

The first, second, third, fourth, and fifth ribs of the left side are fractured transversely about half an inch from their costal cartilages.

The specimen was removed from the body of a man who died from injuries produced by a heavy cart passing over his body.

Pennsylvania Hospital.

1022.—Ununited Fracture of First Rib.

The first rib on the left side is coossified with the sternum, and about half an inch externally there has been an old fracture of the rib, which has remained ununited. The fragments were held together by fibrous tissue, the apposed surfaces being compact and quite smooth.

Case of Evan Clowney, æt. 53, who died in the Pennsylvania Hospital with a sloughing wound of the thigh. No history was obtained of any injury to the rib.

1023.—Ribs, showing United Fracture.

The second, third, fourth, fifth, sixth, and seventh right ribs have been fractured, somewhat obliquely, a little in front of the middle of their arch. The fractures have united, with scarcely any perceptible displacement of the fragments; but with such an excessive production of callus, that the fifth, sixth, and seventh ribs are firmly bound together by strong layers of bone. The second and third ribs present sharp exostoses; and, in addition, there has been a small false joint developed between two exostoses on the third and fourth ribs.

1024.—Costal Cartilages, showing Recent Fracture of the Second, Third, and Fourth.

They are broken transversely, about three-quarters of an inch from the sternum.

1025.—Costal Cartilages, showing United Fracture.

There appears to have been about a third of an inch broken off the sixth and seventh ribs at their anterior extremity; these fractures have united by a cartilaginous or ligamentous matter. In addition, the conjoined costal cartilages of the eighth, ninth, and tenth ribs have been fractured somewhat obliquely, and have become firmly united. There is very little displacement of the fragments, but there still remains a thickened ridge, with several small bony plates developed in it, marking the seat of fracture.

Pennsylvania Hospital—dead-house specimen.

1027.—Cast of the Head of James Moran, æt. 19.

Hung at Philadelphia, May 18, 1837, for murder on the high seas.

1028.—Skull of a Negro (normal).

Pennsylvania Hospital. Presented by Dr. T. G. Morton.

1029.—Portion of a Skull, showing Abnormal Foramina.

The specimen shows an anomalous bridge of bone passing from the posterior angle of the lesser wing of the sphenoid bone to the *posterior* clinoid process; this bridge is joined, about its middle, by a second, shorter one, extending from the *anterior* clinoid process. In this way two abnormal foramina are formed posterior to the optic foramen. There is no appearance

disease in the cranial bones, nor does the abnormal bridge of bone seem like the result of any morbid action.

1030.—Calvaria, showing Induration and Exostosis.

The bone is very dense and heavy ; the diploë very close, and in places scarcely recognizable from compact bone. The calvaria is irregularly thickened, and on the inner surface of the frontal bone, on either side of the median line, is an oblong exostosis. The one upon the left side is by far the most marked, being over an inch in length, three-quarters of an inch in breadth, and raised about a third of an inch above the surface of surrounding bone. The coronal suture is still present in the external table, though very closely joined ; but all traces of the suture have disappeared from the inner table.

The specimen was removed from the body of a colored man who died of apoplexy.

Pennsylvania Hospital.

1031.—Skull, showing Syphilitic Disease.

The frontal bone, for an inch in diameter above the root of the nose, has a porous, cellular appearance, the external table of the skull at this point being almost destroyed. The superior maxillary bones, however, present the most advanced disease ; the anterior edges of the nasal processes, instead of forming curved, thin layers of bone, are enormously hypertrophied, and form thick, bosselated, everted, lip-shaped masses, which constrict the anterior nares. On the right side this border is fully half an inch in thickness. The nasal surface of the nasal processes is also affected and hypertrophied, rendering the inferior meatus of the nose very narrow. The surface of these parts of the superior maxilla is also porous, dotted thickly with the enlarged spaces for the entrance of bloodvessels. The bones forming the deeper parts of the nasal cavities do not seem to be affected.

Removed from the body of a child.

1031^s.—Skull of Adult, showing Syphilitic Disease.

The teeth are almost all gone, and many of their sockets obliterated. The alveolar processes of the superior maxillæ are much atrophied. The roof of the mouth has been entirely destroyed, and the two lower turbinated bones partially removed. The body and greater wings of the sphenoid bone, and the petrous portion of the temporal bones, are also involved, though the disease is here more superficial. A little to the left of the mesial line, above the supra-orbital ridge, the frontal bone presents a marked and somewhat irregular depression half an inch in diameter. The surface of the depression is porous, and at one point there is an oblique opening through the calvaria. This depression is surrounded by a marked ridge of thickened and dense bone, and the entire cranial vault is in a state of advanced internal hypertrophy : sclerosis. On the other hand, the orbital plates of

the frontal bones, squamous portions of the temporals, and inferior fossæ of the occipital are very thin and diaphanous.

The specimen was removed from a patient affected with tertiary syphilis.

Pennsylvania Hospital.

1031¹⁰.—Skull, showing Syphilitic Disease.

The turbinated bones, the vomer, and the palatine bones are in part destroyed; the roof of the mouth is ulcerated through in two places. The perforation on the left side extends from the remains of the alveoli in front to the palate process of the palate bone behind; on the right side the perforation is about a third of an inch in diameter. The inner wall of the antra Highmoriani is partially destroyed on each side, especially on the right. The upper teeth are all gone, and their sockets obliterated. The base of the skull is also involved, the temporal and occipital bones showing extensive though not very deep disease. On each of the superciliary ridges, and on the left malar and left side of the inferior maxillary bone, there is also evidence of marked though superficial ulcerative action.

The specimen was removed from the body of a man, æt. 50, who had suffered from syphilis for years. He was admitted to the hospital April 4, 1857, and died June 4, 1857, from atheromatous disease of the aorta and its valves.

Pennsylvania Hospital. Presented by Dr. T. G. MORTON.

1032.—Two Syphilitic Sequestra from the Frontal Bone.

The sequestra, one of which is about an inch and a half, the other an inch in diameter, involve the outer table and a considerable portion of the diploë. The outer surface is discolored and porous.

They separated after months of suppuration, and were easily removed.

The patient had contracted syphilis twenty years previously, in China.

Pennsylvania Hospital. Presented by Dr. T. G. MORTON.

1034.—Depressed Fracture of Left Temporal Bone (recent).

The injury was produced by a blunt instrument. The fragment which is broken from the upper edge of the squamous plate is irregularly oval, and about three-quarters of an inch in diameter. It was driven deeply into the brain.

Removed from a man who died in the Pennsylvania Hospital from intra-cranial hemorrhage consequent on the above injury.

1035.—Depressed Fracture of Left Temporal Bone.

The injury was produced by a direct blow from a billy, which has driven a sharp triangular spicule, about half an inch in length, from the upper edge of the squamous portion, deeply into the brain.

Removed from a patient who died in the Pennsylvania Hospital from the effects of the above injury.

1036.—Gunshot Fracture of Left Parietal Bone.

The ball, which was a small pistol shot, has penetrated the anterior inferior angle of the bone close to the coronal suture. The hole in the external table is irregularly oval, half an inch by a third of an inch in size. The fracture of the internal table is much larger, triangular in shape, the sides of the triangle an inch long. The ball was removed from the brain.

No history.

Presented by Dr. T. G. MORTON.

1037.—Gunshot Fracture of Os Frontis.

The ball, which was a slug from a pistol, has perforated the os frontis in the median line, about an inch above the nasal spine, making an irregularly round opening about half an inch in diameter. There are no fissures extending from the fracture. The ball then passed obliquely through the brain, striking the left parietal bone, producing a slight indentation, and was thence reflected into the substance of the left hemisphere of the brain, where it was found imbedded.

Case of a man admitted to the Pennsylvania Hospital in June, 1858. He lived eight days, with complete loss of consciousness, and paralysis of the right side of the body.

1038.—Fracture of Cranium, with Necrosis.

The specimen has an area about three inches in diameter, reaching almost from one parietal protuberance to the other, over which the external table is roughened, porous, and sunk beneath the level of the surrounding bone. It presents, also, an irregular sequestrum, about an inch and a half long, in the left parietal bone, near the sagittal suture; it involves the entire thickness of the bone, though the portion of the internal table which it includes is smaller than that of the external. This sequestrum is completely separated, and the edges of the surrounding bone have been partially rounded off. At a corresponding point on the right parietal bone, there is a second and smaller sequestrum, of very irregular shape, which is still retained in position, owing to the internal table not being entirely separated. On the external layer of this sequestrum are six or more little holes, which were drilled by Dr. Agnew, in the hope of obtaining nourishment for the denuded external table.

Case of McGarvey, a lad admitted to the Pennsylvania Hospital with an extensive scalp wound, baring a space of at least four inches square of the parietal bones, and with injury to the external table. Whilst in the hospital, he fell over the railing of the stairway from the third floor. He remained unconscious, with numerous convulsions, for some days, until his death. At the autopsy cerebral meningitis was found, especially about the base of the brain.

1039.—Compound Comminuted Fracture of Skull.

The injury was produced by an axe. The fracture involves the left parietal, temporal, and occipital bone. The parietal bone (postero-inferior part)

is splintered into nine fragments. The mastoid process is separated from the squamous portion of the temporal bone by a fissure running into the auditory meatus and across the base of the skull, almost to the basilar process, and there is also a fissured fracture extending from the mastoid process to the posterior part of the foramen magnum. The middle meningeal artery was ruptured, with profuse hemorrhage, and many of the fragments were driven into the brain.

Case of a young woman admitted to the Pennsylvania Hospital, having been struck on the head with an axe. The fragments of bone were removed; a large amount of the brain sloughed and was discharged. The patient sank, and died on the third day.

Presented by Dr. T. G. MORTON.

1040.—Compound Comminuted Fracture of Frontal Bone.

A large fragment is broken out just above the supra-orbital ridge, involving the whole thickness of the bone. There is also marked depression of the remaining part of the superciliary region. From the point of the injury several fissured fractures extend a distance of several inches into the substance of the frontal bone. Several of these fissures involve only the external plate. One of them in particular, however, involves the whole thickness of the bone, the fracture of the *internal* plate being much longer than that of the *external*.

Case of a man admitted to the Pennsylvania Hospital, having been struck in the forehead by a cow-catcher. Fragments were driven into the brain. The patient was semi-comatose on admission, and died next day.

1040⁵.—Fragments from Fractured Skull (Case 1040).

The specimen shows twelve fragments of different sizes, forming a portion of the superciliary ridge of the frontal bone.

1041.—Fracture of Base of Skull, involving Occipital Bone.

The fissure begins near the junction of the parietal bone, about two inches to the left of the median line, and extends longitudinally backwards about four inches. On reaching the rim of the foramen magnum, the fissure bifurcates, one branch extending through the transverse process of the occipital bone, the other into the foramen magnum near the median line. Almost the entire half (left) of the rim of the foramen magnum is thus broken loose. The anterior condyloid foramen is also involved in the line of this fracture. A short transverse fissure runs towards the mastoid process just above the post-mastoid foramen.

Case of Owen Reily, set. 40, admitted to the Pennsylvania Hospital June 2, 1863, having been thrown from his cart, striking his head violently against the pavement. On admission, he was cold and insensible, with dilated pupils, and presented an uneven, ragged wound of the scalp on the left side of the occiput, and a large hæmatocele on the sacrum. There was bleeding from the ears. Some reaction took place, but death followed in thirty-six hours. The brain showed evidence of severe

concussion at the seat of fracture, and at a point diagonally from this, on the right lobe. The brain-tissue was pulpified, and a clot was found under the arachnoid on the right side of the anterior lobe at its base. There was also a small quantity of bloody serous fluid in the ventricles.

1042.—Right Orbit, showing Punctured Fracture of Posterior Wall.

Case of Nellie Taylor, *æt.* 18, admitted to the Pennsylvania Hospital April 25, 1866. She was completely unconscious, with violent convulsive movements of the extremities during the first few hours, but finally entire abolition of voluntary and reflex movements ensued, with involuntary discharges, stertorous breathing, and death in thirty-eight hours.

There was a small wound, half an inch long, over the inner canthus of the right eye; the knife had then chipped a splinter of bone from the orbital ridge, traversed the orbit, and entered the skull through the posterior wall of the orbit, external to the optic foramen, penetrating the anterior part of the right middle lobe of the cerebrum to the depth of more than one inch. The surrounding brain-substance was broken down, and there was a large clot over the convexity of the anterior and middle right lobes, while some blood had also escaped under the tentorium, compressing the base of the brain.

Dr. W. PEPPER, *Proc. Path. Soc.*, vol. ii., May 9, 1866.

1043.—Fracture of Parietal Bone about two inches and a half from Coronal Suture, and about one inch from Sagittal Suture.

The fracture has involved the entire thickness of the bone, and has been attended with loss of the fragment. The injury has, however, evidently been partially repaired. There is a depression in the external table of the skull over a space an inch and a half by an inch in diameter. The edges of this depression are, however, bevelled off and sloping, so that the opening in the internal table is a slit three-quarters of an inch long by a third of an inch wide. The sloping edges present a compact bony outer surface. The inner surface of the parietal bone, for half an inch around the opening in the inner table, presents a slightly radiated structure. The edge of the opening in the inner table is very thin and sharp. The aperture has been almost entirely closed also by firm fibrous membrane attached to its margin.

History unknown.

1045.—Fragments from Fractured Skull.

The fracture was a compound comminuted one, involving the frontal bone. The soft parts were much lacerated. The pieces, which were removed by means of an elevator and saw, are five in number, three quite minute, the largest triangular and about two-thirds of an inch in each of its measurements. The dura mater was exposed for the space of one square inch, but was not injured. The patient was conscious throughout, and was discharged in perfect health.

Case of J. W., *æt.* 32, admitted to the Pennsylvania Hospital June 8, 1864. Discharged September 2, 1864.

1046.—Fragments from Fractured Skull.

Portions of the orbital and the superciliary parts of the right frontal bone.

Case of William Northern, admitted to the Pennsylvania Hospital April 23, 1834, having been struck on the right side of the head by a crane. The blow fractured the anterior inferior part of the os frontis over the orbit. The upper part of the fractured bone was forced down over the eye. A small loose fragment was removed, and the depressed portion elevated. The patient died April 29. At the autopsy, meningitis, with abscess of the brain, was found. The external wound was four and a half inches long, extending from near the internal canthus upwards and outwards. A rough edge of bone extended from the inner part of the orbital ridge half an inch upward and one inch outward, and thence along the middle of the orbital plate, including the space from which the bone was removed.

Presented by Dr. KIRKBRIDE.

1047.—Necrosis of Left Malar Bone.

The bone is reduced in size, very light, its surface porous, and in one or two places perforations of the thinner parts of the bone existed. No osteophytes at any part, the irregularity of the surface being entirely due to the destructive process.

Case of a woman, æt. 55, admitted to the Pennsylvania Hospital with a fetid ulcer over the malar bone, which had existed for many weeks. No cause is known. A small incision was made, and the bone removed entire with forceps, after which the cavity readily healed.

1048.—Encephaloid Cancer of Superior Maxilla (Right).

The cancellated structure of the bone is filled with a soft encephaloid growth, which also extends into the antrum.

Removed in 1857, by Dr. Pancoast, from a young woman, æt. 21. She made a good recovery, but several months afterwards the disease returned.

Presented by Dr. T. G. MORTON.

1050.—Caries of Inferior Maxilla.

The disease is seated in the left half of the body of the bone, involving especially its outer surface. The compact layer has been entirely destroyed for the space of an inch and a half in length, and there are also several deep excavations into the substance of the bone. The diseased portion presents a corroded, gnawed appearance. The surrounding bone presents no osteophytes.

Case of a woman, æt. 60, who had an epithelial cancer of the face, which had been growing for five months, and had invaded much of the surrounding soft parts. The glands of the neck were also much enlarged. The inferior maxilla was removed, and found corroded, as above described, under the diseased mass. Numerous spicules of bone were found in the deep carious ulcers.

Presented by Dr. T. G. MORTON.

1050⁵.—Phosphor-Necrosis of Inferior Maxilla.

The specimen shows the entire right half of the bone involved in the disease, the body being most affected; about an inch and a half of the left side was also involved. There are numerous patches of spongy or spiculated osteophytes on both the external and internal surface; the alveoli are enlarged, and in places almost destroyed, and but four sound but loose teeth remained at the time of the operation. The bone is discolored and somewhat too friable.

Case of Frederick Courtney, æt. 22, admitted to the Pennsylvania Hospital January 11, 1865. He had been engaged in the manufacture of lucifer matches for sixteen years, and the disease had existed fully seven months. The whole of the right half and part of the left half of the lower jaw were removed without external incision, and the patient made a very rapid recovery, a considerable amount of new bone being formed along the line of the jaw.

Dr. WM. HUNT, *Am. Journ. Med. Sci.*, April, 1865.

1051.—Cystic Osteo-Sarcoma of Face.

The specimen shows an enormous mass involving the left superior maxilla. On section, it is seen to be composed of very numerous cystic cavities, of varying sizes and separated by walls of different thickness, some of which contained fluid, while others are filled with a solid sarcomatous growth, or a more loose, almost gland-like, tissue.

Case of a woman in the Pennsylvania Hospital. The tumor was removed by Dr. A. Hewson, but death occurred from hemorrhage and the effects of prolonged etherization.

1053.—Inferior Maxilla, showing a Compound Comminuted Fracture involving the left half of its body.

The flesh was torn from the bone, and the larynx and œsophagus opened.

Case of John Wilkinson, æt. 40, who was run over by a train of cars. His right arm and foot were crushed off, and there was a fracture of the right ribs and sternum. (See Spec. 1017⁵.)

1055.—Bones of Shoulder-Joint Articulated.

Presented by Dr. T. G. MORTON.

1056.—Bones of Hand Articulated.**1057.—Bones of Hand Articulated.****1059.—Exostosis on Clavicle.**

The exostosis springs from the under surface of the left clavicle, and has the form of a truncated pyramid, the apex being a flat surface about half an inch by a third of an inch, apparently produced from pressure upon the first rib.

No history.

Presented by Dr. T. G. MORTON.

1061.—Fracture of Clavicle (Cast).

The fracture has been seated about the middle of the left clavicle, and appears to have united with slight shortening, but considerable formation of callus.

Presented by Dr. T. G. MORTON.

1062.—Recent Fracture of Clavicle, showing Deformity (Cast).

The fracture is at the middle third of the left clavicle, and shows anterior dislocation, with overlapping of the distal fragment.

Presented by Dr. T. G. MORTON.

1063.—Compound Comminuted Fracture of Clavicle.

The fracture involves parts of the middle and inner thirds of the left clavicle. The bone is broken into numerous fragments at this point, and several spiculæ had penetrated the pleural cavity.

Case of a child admitted to the Pennsylvania Hospital July 10, 1861, having been struck by a ball from a firearm, over the left clavicle, about an inch and a half from the sternal articulation. The ball passed backwards, splintering the bone, passing through the apex of the left lung, and was extracted from beneath the trapezius muscle. Death ensued twelve days afterwards, from pleuro-pneumonia.

1064.—Fracture of Right Clavicle (united).

The fracture has been seated about the junction of the inner and middle thirds, and has united, with slight anterior displacement and overlapping of the sternal fragment. The projecting distal extremity of this fragment has been almost completely rounded off. There are two spiculated osteophytes projecting from the postero-inferior surface of the bone at the line of union of the fracture. There are also two spots of roughening on the under surface of the bone, near the acromial end.

Removed from the body of an old man who died in the Pennsylvania Hospital from cirrhosis of the liver.

1066.—Scapula, showing Effects of Rheumatoid Arthritis.

There is a patch of eburnation at the centre of the glenoid cavity, about half an inch in diameter. The polished surface is not uniform, but is dotted over with enlarged porous openings. The posterior segment of the articulating surface appears quite healthy, but the anterior margin presents marked evidence of disease. Near the antero-inferior part there is a depressed portion three-quarters of an inch long and two lines wide. The substance of the bone seems to have been eaten into here, and presents at the bottom of the depression a network of large pores. Towards the anterior part, the articulating surface is increased in size and its margin rounded by a formation of new porous bone, which deposit continues for about an inch on the under surface of the scapula, towards its venter, and is prolonged on the base of the coracoid process. The neck of the glenoid cavity is thus much

thickened. The spine of the scapula, towards its outer portion, as well as the acromion process, presents a condition of osteo-porosis. The compact layer is destroyed, and rendered uneven and porous. The bone is here very brittle, so that the acromion process has broken off in two fragments. The anterior half inch of the acromion process is not involved. The under surface of the spine presents a rim half an inch in width, where the bone is chalky white, but not too porous. The rest of the bone seems healthy.

History unknown.

1067.—Fracture of Scapula (recent).

The spine of the left scapula is fractured transversely at the base of the acromion process, completely separating this portion.

Case of a man admitted to the Pennsylvania Hospital, having been run over by a car, the wheels passing directly over his body. The upper five ribs on the left side were also fractured (see Spec. 1021'), and there was an united gunshot fracture of the right humerus (see Spec. 1080).

1067^s.—Scapula, showing Radiating and Comminuted Fracture involving the Body of the Bone both above and below its Spine.

Case of John Mealy, *æt.* 30, admitted to the Pennsylvania Hospital June 2, 1866, with a wound in the left shoulder, caused by a wad discharged from a musket, the load having contained no ball. There was extensive infiltration of the muscles of the back, with profuse sanious discharge, exhaustion, and death on the ninth day, from formation of heart-clot. Part of the wad was removed at the time of admission; the rest, more than three-quarters of an inch in diameter, was found beneath the scapula.

Dr. WM. PEPPER, *Proc. Path. Soc.*, vol. ii. p. 237, June 27, 1866.

1068.—Gunshot Fracture of Scapula.

A fragment two inches long and half an inch broad has been broken off from the anterior margin of the right scapula, beginning about one inch below the glenoid cavity.

Case of a man admitted to the Pennsylvania Hospital, having shot himself accidentally, the entire charge of a shot-gun entering his axilla, passing under the axillary artery. Death followed from erysipelas.

1070.—Compound Comminuted Fracture of Right Clavicle and Scapula.

The outer half of the clavicle presents a fracture dividing the bone into three fragments. The scapula is broken into eight pieces. One of the fractures extends from the anterior margin an inch below the glenoid cavity upwards, through the spine, to the upper margin of the bone, thus separating a fragment which includes the acromion and coracoid processes and the glenoid cavity. This fragment is subdivided by a fracture passing through the base of the spine, thus separating the acromion process. The

rest of the spine and the superior part of the bone are separated by a transverse fracture from the venter, and this latter part is fractured into four fragments.

Case of a man admitted to the Pennsylvania Hospital, having been run over by a car on the Reading Railroad. The axillary artery was exposed and twisted off, but no hemorrhage occurred, the vessel being filled with clot. No reaction occurred, the patient dying soon after from shock.

Presented by Dr. T. G. MORTON.

1072.—Humerus, showing effects of Old Necrosis.

The bone is very heavy; the upper two-thirds of the shaft are thick, and present numerous sharp projections, and nodulated and laminated osteophytes. There is one large cloaca in the upper third of the bone, on its outer surface, with a wide mouth and prominent margin, near which the osteophytes are especially marked.

Case of John Rush, æt. 29, a miner, admitted to the Pennsylvania Hospital July 3, 1866, with necrosis of the left tibia and acute suppuration of the knee-joint. An abscess over the tibia was opened, and the bone found enlarged, heavy, and its surface roughened. He was much exhausted, became delirious, and died in five days. For the past nineteen years he had suffered with numerous abscesses in connection with the right humerus and left tibia, and several pieces of bone had been discharged.

1073.—Necrosis of Humerus, involving entire Shaft.

The disease extends from the elbow-joint, which is itself affected, to the head of the humerus. The entire shaft is greatly reduced in thickness. This is so marked in the middle third of the bone, that the continuity of the bone is destroyed. This mere shell of a shaft incloses a large cavity extending from the condyles up to the head of the bone. This cavity contained three unusually large sequestra, from two to three inches in length, and constituting, apparently, almost the entire old shaft of the bone in thickness. The sequestra are exceedingly light and spongy in texture, and present in their centre the original medullary cavity of the bone. The new shaft presents nine large cloacæ, varying in size from a third of an inch in diameter to an inch and a half by half an inch. The edges of the cloacæ are thin and shelving, and the surrounding bone is highly porous, presenting many fine perforations. The exterior of the shaft, in addition to presenting these cloacæ, is clumsy and misshapen, presenting an irregular surface with numerous ridges, and marked in most of its extent by large vascular pores. There are very few osteophytes in the upper portion of the bone, but towards the condyles there are several patches of spiculated and leafy osteophytes. The inner surface of the sequestral cavity presents a very finely porous structure.

Case of a negro admitted to the Pennsylvania Hospital, stating that he had fallen one year previously, striking his arm on the ice. The disease of the bone had followed this, and required amputation at the shoulder-joint. The scapula was also

somewhat involved, and at the time of his discharge, with a good cure, there were some fistulous openings still remaining.

Presented by Dr. T. G. MORTON.

1074.—Resected Portion of Humerus.

The fragment is about one inch and a half long, is a portion of the shaft just above the condyles, and presents at its distal end an irregular, oblique, fractured surface.

Case of a young lad admitted to the Pennsylvania Hospital, having received a compound comminuted fracture of the humerus by being caught in the belting of machinery. The protruding portion of the bone was removed, the parts placed in apposition, and a perfect cure resulted.

1075.—Resected Portion of Humerus.

The piece is two-thirds of an inch long, and is itself broken in half. It is a portion of the middle third of the shaft.

Case of compound comminuted fracture resulting from a fall. The operation was performed immediately after admission into the hospital, and a good cure resulted.

1076.—Humerus, showing Comminuted Fracture at Anatomical Neck.

The line of fracture extends from just below the tuberosities postero-superiorly through the anatomical neck, involving the head anteriorly to the insertion of the capsular ligament. The cancellated structure of the head was a good deal broken down; the capsular ligament was ruptured anteriorly; the upper end of the shaft of the bone had several fragments, one of them quite large, broken from it.

Case of a muscular German, æt. 43, admitted to the Pennsylvania Hospital, having fallen from a tree about twenty-five feet high, striking his shoulder.

1077^s.—Humerus, showing Partial Fracture of its Head.

A fragment of stone, half an inch in diameter, has torn a piece from the greater tuberosity, and is imbedded in the cancellated structure of the head.

Case of John Drumm, æt. 35, a miner, admitted to the Pennsylvania Hospital August 2, 1866, having been injured by the premature explosion of a blast. His face and chest were badly scorched. The main body of the charge passed through the soft parts of the left arm, lacerating and charring the tissues up to the shoulder, and laying open the shoulder-joint; the brachial artery was not wounded.

Amputation at the shoulder-joint was performed by Dr. Morton, but the patient reacted imperfectly, and died on the sixth day.

1078.—Humerus, showing Transverse Fracture two and a half inches above the Condyles, and a Partial Fracture of the Head, a small piece being broken out.

Case of Henry Sohlinger, æt. 21, admitted to the Pennsylvania Hospital August 6, 1866. His left arm had been caught between heavy rollers, the hand terribly mashed,

the fractured ends of the humerus pushed out through the soft parts, and the tissues over the shoulder and in the axilla literally torn off; the brachial artery was exposed, but not injured.

Amputation at the shoulder-joint was performed by Dr. Morton; the acromion process of the scapula being sawn off, on account of injury to the soft parts over its position. The case recovered rapidly.

1079.—Humerus, showing Compound Fracture, followed by Osteo-Myelitis and Pyæmia.

The fracture has been seated at the junction of the lower and middle thirds of the bone. No union has occurred. The upper end of the distal fragment shows a rim of new-formed bone, to which the capsule of the false joint was attached. The upper part of the shaft has been affected with osteo-myelitis, which has led to a certain amount of central necrosis about an inch and a half above the fracture. The exterior of the bone presents irregular thin layers of porous new bone. The head is separated from the shaft, and the compact layer immediately below the head has undergone osteo-porosis; the cancellated structure is much discolored and broken down.

The patient from whom the specimen was removed died in the Pennsylvania Hospital in the seventh week following the fracture, no operation having been performed. At the autopsy, pyæmic abscesses in various organs were found; the peritoneum was much thickened, the humerus denuded up to its head, and there was an abscess in the cancellated structure in the head of the bone.

1080.—Humerus, showing United Gunshot Fracture.

The fracture has occurred in the upper third of the bone. The entire anterior and inner portions of the bone seem to have been shattered away by the ball, which was a minie ball; there is, however, a narrow bridge perforated in one point, uniting the fragments of the shaft on its inner aspect. The main bond of union is, however, a massive bridge of new bone uniting the posterior surfaces of the fragments; this is fully two inches wide at its broadest part, half an inch thick, and extends from one inch below the head to below the middle of the shaft. The specimen thus presents firm union effected by means of these bridges of new bone, between which a large rounded opening exists, evidently the original track of the ball. There are also other openings which pass through the larger of these bridges. It is evident that the shaft has been completely fractured, but it is impossible to say whether any of the fragments have remained and become imbedded in the new-formed bone above described. The opening on the inner and anterior surface has a rounded edge, and is not much bevelled outwards. There is a small fragment of lead imbedded at one point of this rim. The posterior orifice of the track is larger and very much more irregular.

Case of a soldier wounded at the battle of Antietam by a minie ball, and admitted to the Pennsylvania Hospital. After an illness of eight months, with the removal of

much of the shattered bone, firm union occurred, and he had a useful arm. He died soon afterwards from the effects of a compound comminuted fracture of the other arm and scapula, resulting from a railroad injury while on a drunken frolic. (See Spec. 1067.)

1081.—Humerus, showing United Fracture.

The fracture has been seated at the junction of the middle and upper thirds, has been oblique, and union has occurred with marked external angularity, the lower fragment having slid outside of the upper one. There is a good deal of callus investing the upper extremity of the lower fragment, which is completely protected by a layer of compact bone, which presents, however, four or five small oval openings. A section through the fragments shows that the medullary cavity in the lower fragment has not been at all obliterated. The lower end of the upper fragment presents a quite dense cancellated structure, filling its interior for an inch and a half above the line of fracture. Cancellation of the original walls of the shaft, where they traverse the present line of the bone, has advanced to a considerable extent, though no distinct medullary cavity has yet been formed through them.

The patient from whom the specimen was removed died in the Pennsylvania Hospital. History unknown.

1081⁵.—Humerus of an Infant, showing United Fracture at Junction of Middle and Lower Thirds.

There is considerable angularity, and the projecting end has not been materially rounded off.

No history.

Presented by Dr. T. G. MORTON.

1082.—Humerus, showing Ununited Fracture, with False Joint.

The fracture has been seated in the upper part of the middle third of the left humerus. The lower end of the upper fragment terminates in a conical portion, about three-quarters of an inch long, which is formed from the outer wall of the bone only, and presents a rounded extremity. There is a little spinous prolongation, also, from the inner wall of the humerus. The whole surface of the extremity of the bone is covered by a layer of compact tissue. This answered the purpose of a ball in a ball and socket joint, the socket being formed in the upper extremity of the lower fragment, which is hollowed out into an almost hemispherical cup with irregular edges and a surface of compact bone. A capsular ligament was attached above and below the fracture, and the joint thus formed contained a synovial-like fluid. The entire humerus is exceedingly light, the compact layer much reduced in thickness, and the cancellated structure removed by absorption. These changes are especially marked in the upper fragment. The head is altered in shape, and presents several large patches where the compact layer is entirely destroyed and the surface loosely porous.

Case of a man, æt. 44, who died from dropsy. He was of intemperate habits, and a subject of syphilis. He fell down stairs, fracturing his humerus and femur. He

recovered the use of his thigh, but an ununited fracture of the humerus resulted, for the relief of which he would not submit to any operation.

Presented by Dr. GOODMAN.

1088.—Radius, showing Caries resulting from Ulceration of Tissues of Forearm.

The disease occupies the middle third of the bone. It has caused a development of spongy osteophytes which form a prominent rim, skirting a gnawed surface three inches long, and involving the entire shaft, excepting its posterior surface. The elevation of the edges gives to this surface the appearance of a depressed excavated ulcer. At the time of removal, the pores and small cells of the diseased portion of the bone were filled with a yellowish, gelatinous, translucent substance.

Case of C. R., æt. 19, admitted to the Philadelphia Hospital July 10, 1862. He was of scrofulous habit, and had a large sloughing ulcer comprising nearly the entire front of the forearm. On the 19th the radial artery opened, and profuse hemorrhage resulted. Amputation was resorted to.

Presented by Dr. H. C. WOOD.

1089.—Radius, showing United Fracture.

The bone has been fractured about half an inch above the lower end. Firm union has occurred, with slight posterior displacement of the lower fragment. Another fracture has extended at right angles to this, breaking off the posterior third of the articulating surface of the radius. Firm union has also occurred here.

Case of a woman who died in the Pennsylvania Hospital from very extensive burns. The fracture had occurred some years previously, and the arm had then been kept in splints for five weeks.

Presented by Dr. T. G. MORTON.

1090.—Radius, showing Fracture in Lower Fifth.

The fracture is seated half an inch above the articulating surface, and extends transversely through the bone, without involving the joint. The ulna was dislocated, and torn from the ligaments of the wrist.

No history.

1091.—Cast of Recent Barton's Fracture of Radius, showing characteristic Lateral Deformity.

Presented by Dr. T. G. MORTON.

1093.—Ulna, showing Central Necrosis, with External Hypertrophy.

The entire ulna is involved, save its lower end. It is much thickened and enlarged, and the external surface nodulated and irregular, with thickly-set villous and warty osteophytes and enlarged vascular pores; there are also several cloacæ. On section, the original shaft is seen to have been almost entirely necrosed; and fragments of it, one of them three inches long, are

still lying in a narrow sequestral cavity. The walls are much thickened, especially the posterior one, which measures an inch and a quarter in width near the olecranon process. The osseous tissue is in places indurated, while in other parts it is porous and cancellated.

History unknown.

1095.—Ulna, showing Recent Double Fracture.

The upper fracture is near the junction of the upper and middle thirds, and is somewhat oblique. The lower fracture is in the lower third, and is transverse. At the time of removal the fractures were not complete, the fibres of the bone which remained unbroken being much bent.

Case of a boy, *æt.* 15, admitted to the Pennsylvania Hospital, having had his left arm caught in the band of some machinery and been carried twice around the shaft. The humerus was broken, and the arm completely torn off about three inches below the shoulder-joint. Amputation was performed through the joint by Dr. Norris, and recovery ensued.

Presented by Dr. H. L. HODGE.

1096.—Cast of Fracture of Elbow-Joint, with Probable Dislocation of the Head of the Radius.

Presented by Dr. T. G. MORTON.

1098.—Ulna and Radius, from a Case of Enchondroma of Elbow, the soft parts having been removed by maceration.

The olecranon process is completely separated from the shaft, the upper end of which forms a cup-like expansion more than two inches in diameter, in which the olecranon now lies loosely. The apposed surfaces present a loose, cancellated structure. The upper third of the radius is also involved, and presents a gnawed, irregular surface, with numerous osteophytes. The anterior surface of the humerus, for a short distance above the condyles, is roughened and irregular. All of these parts were involved in the enchondromatous growth.

Case of Bernard Coyle, a laborer, *æt.* 30, admitted to the Pennsylvania Hospital February 24, 1886. There was a large enchondromatous tumor, springing from the neighborhood of the right elbow-joint, for which amputation was performed by Dr. A. Hewson in the lower third of the humerus. The patient died of pyæmia.

1099.—Ulna and Radius, showing Necrosis.

There are evidences of marked disease in the wrist-joint, the articular surfaces of the radius and ulna presenting a porous, worm-eaten appearance. The outer surface of the bones, for an inch and a half above the joint, is chalky and friable. The shaft of the radius is then comparatively healthy up to three inches below its head, where a similar porous condition of its surface begins and extends to the elbow-joint. The ulna is much more diseased; there are several irregular cloacæ in its shaft, through which it can be seen that central necrosis has extended from the junction of the

lower and middle thirds upwards. At the junction of the middle and upper thirds there is extensive destruction of the outer layer of the bone. The entire shaft for the upper two inches is light, porous, and has almost completely separated from the lower part of the bone. The articulating face of the olecranon process presents marked evidence of similar disease to that which existed in the wrist-joint.

History unknown.

1100.—Bones of Upper Extremity, showing Compound Fracture.

The humerus is fractured obliquely a little below its middle, and there is also an irregularly oblique fracture of the ulna at the junction of its middle and upper thirds, and of the radius about its middle.

Case of a boy admitted to the Pennsylvania Hospital, having been caught in a fly-wheel and carried several times around its shaft. Amputation was performed by Dr. Norris.

1101.—Bones of Upper Extremity, showing Compound Fracture.

There is an oblique fracture of the humerus at the junction of the middle and lower thirds, and there is also a fissured fracture of the lower fragment. The ulna and radius are also fractured at the junction of the upper and middle thirds, the fracture of the ulna being very oblique.

Case of a boy admitted to the Pennsylvania Hospital, having been caught in the band of a fly-wheel. Amputation was performed by Dr. Norris, and recovery ensued.

1102.—Bones of Upper Extremity, showing Compound Fracture.

There is a fracture of the condyles of the humerus, the plane of which is laterally transverse, but slightly oblique in an antero-posterior direction. The ulna is fractured at the junction of its middle and lower thirds. The radius presents two fractures, one in the upper part of the lower third, the other in the upper part of the middle third. All of these latter fractures are slightly oblique.

Case of a young boy admitted to the Pennsylvania Hospital, having been injured in a machine-shop. Amputation was performed, and recovery ensued.

1104.—Bones of Wrist-Joint, showing Caries.

Several of the carpal bones, especially the cuneiform, unciform, and trapezium, show a destruction of their outer surface in irregular patches, a porous, cancellated structure being exposed.

Case of W. A., æt. 30, admitted to the Pennsylvania Hospital July 16, 1864, a slug-shot having entered the palm of his hand just anterior to the pisiform bone, and imbedded itself in the carpus. Erysipelas ensued, with burrowing abscesses, and amputation was performed at the middle third of the forearm, August 3, 1864.

1105.—Bones of Wrist-Joint, showing Necrosis and Caries.

The carpal bones, with the exception of the os lunare, are almost entirely destroyed, being in great part reduced to irregular, coarsely porous, dis-

colored fragments of bone. The heads of all the metacarpal bones, save that of the thumb, are also involved, and present a carious condition, with loss of substance from necrosis. The lower one inch of both radius and ulna presents a porous, worm-eaten appearance, and the articulating surface of the radius is in great part destroyed.

Case of M. S., æt. 32, admitted to the Pennsylvania Hospital June 22, 1864, with palmar abscess from a neglected felon which had formed on his little finger two weeks previously. The disease involved the wrist-joint, despite free incisions, and amputation was performed July 20, 1864.

1106.—Cast of Enchondroma of Hand.

The growth presents an irregularly lobulated appearance, the lobes varying in size from half an inch to four inches in diameter. All the metacarpal bones and phalanges appear to be involved.

No history.

Presented by Dr. FLEMING.

1107.—Cast of Enchondroma of Finger.

The morbid growth is hemispherical in shape, about one inch in diameter at its base, and springs from the second phalanx of the middle finger of the right hand.

No history.

Presented by Dr. FLEMING.

1107⁵.—Enchondroma from Thumb.

The tumor was about the size of a pigeon's egg, surrounded by a thin capsule of compact bone. It communicates throughout its entire base of attachment with the cancellous structure of the first phalanx, and presents a delicate osseous framework, filled with semitransparent, bluish-white cartilage. Its microscopic characters are those of enchondroma.

Removed by Dr. Agnew from the thumb of a lad. There was no other similar growth elsewhere.

1109.—Normal Adult Pelvis.

1110.—Adult Pelvis, showing Incomplete Ossification.

The crista illiorum and tubers of ischia are ossified, but are not joined with the bodies of the bones. There is also imperfect union between the alæ of the sacrum.

History unknown.

Presented by Dr. T. G. MORTON.

1112.—Pelvis, showing Exostoses.

On the border of each obturator foramen are seen numerous spiculated exostoses. There are also small exostoses on the tubers of the ischia. The first sacral vertebra presents unusually well developed spinous and

inferior transverse processes. The union of the latter processes with the corresponding ones of the second piece of the sacrum is to a great extent cartilaginous.

Case of an old negro who died of apoplexy.

Presented by Dr. T. G. MORTON.

1113.—Pelvis, showing Gunshot Fracture.

At the postero-inferior part of the obturator foramen a fragment about one inch in length has been broken off from the rim.

Case of a young man admitted to the Pennsylvania Hospital, having been shot by a round ball in the groin. Death occurred in a few hours from hemorrhage from the divided femoral vein. The ball was found deeply imbedded in the tissues behind the ischium.

1115.—Pelvis, showing Comminuted Fracture, chiefly involving the Left Side.

The posterior part of the left ilium is broken into three pieces, and the anterior rim of the sacro-ischiatic notch broken off, forming a sharp falci-form fragment, which was so displaced as almost to sever the great sciatic nerve as it emerges from the pelvis. There is also a simple fracture of both rami of the right os pubis. The subperitoneal fascia was infiltrated with blood, and the psoas, iliac, and gluteal muscles ecchymosed and lacerated.

Case of Abby Brown, æt. 65, admitted to the Pennsylvania Hospital April 19, 1866, having fallen about fifteen feet from a window to the stone pavement. She was completely unconscious, with entire abolition of reflex and voluntary movements of the body, paralysis of the left side of the face, and diaphragmatic respiration. Death followed in twenty-one hours. There was, besides fracture of the pelvis, extensive meningeal apoplexy, but no fracture of the skull; double fracture of the ten upper ribs on the left side, the two lower ones being broken in but one place; a Colles' fracture of the left radius, and a fracture of both bones of the right leg in the lower fifth.

Dr. W. PEPPER, Proc. Path. Soc., vol. ii. p. 226, April 25, 1866.

1116.—Pelvis, showing United Fracture.

The fracture has occurred in the descending ramus of the pubis, close to the ischium. In uniting, the end of the upper bone has been dislocated outwardly, and union has occurred with the upper and outer part of the body of the ischium. The union is not very extensive, and is effected by means of newly-formed bone. There are no osteophytes about the seat of the fracture, but a few small spiculated ones project inwards from the margin of the obturator foramen. The portion of the bone between the upper rim of the acetabulum and the horizontal ramus of the pubis seems thickened, and presents a few osteophytes, as though a powerful strain produced by the fracture of the descending ramus had led to some hyperostosis.

Case of a man who died in the Pennsylvania Hospital, having suffered a fracture of the pelvis two years previously, from the fall of a bank of earth.

Presented by Dr. T. G. MORTON.

1119.—Femur (Cast), showing enormous Encephaloid Cancer, involving all the Tissues of the Thigh.

Case of a patient who died in the Pennsylvania Hospital.

Presented by Dr. FLEMING.

1120.—Femur, showing Sequestrum, the result of Scrofulous Disease.

The specimen shows a portion of the shaft of the femur, five inches long, from the middle and lower thirds. The bone is the seat of marked internal and external hyperostosis, and is very heavy and dense. The sequestrum, which is about three inches and a half long by one inch and a quarter in width, is evidently a portion of the old shaft of the femur; it is very movable, and projects half its extent from its sequestral capsule, but is still held by one projection. The sequestral capsule is small, and has a large cloaca on either side of the femur, the larger being fully three and a half inches long. The capsule has everywhere a compact wall.

No history.

1121.—Bones of Leg, showing Atrophy, resulting from Chronic Synovitis.

The shaft of the femur is comparatively healthy. The articular surface of the condyles is irregular; in places nodulated, in others presenting burrowing excavations. The patella is small, but sound. The head of the tibia is to a great extent destroyed, the remaining part somewhat resembling coral, presenting numerous excavations. In both the tibia and femur the disease is almost limited to the epiphysis, which is not coossified with the shaft. The shaft of the tibia is small and rounded, at its centre being little more than half an inch in diameter. The fibula is exceedingly small, from a quarter to a third of an inch in diameter, and rounded.

Case of a boy, æt. 17. The limb was injured at the age of five years, inflammation followed, several abscesses formed, connecting with the knee-joint, and have since been discharging pus with spiculæ of bone. The leg was contracted, shrunken, and entirely useless. Amputation was performed in the middle third of the thigh, and recovery ensued after some necrosis of the end of the femur.

Presented by Dr. T. G. MORTON.

1122.—Femur, showing Necrosis, with External Hyperostosis.

The head of the bone is healthy, but the entire rest of the shaft, from the trochanter major to the knee, is involved in the disease. The bone is more than double its normal size, is clumsy and misshapen. Along the linea aspera there is an extensive development of laminated, spiculated, and broad-based osteophytes, interspersed among which are numerous very large vascular openings. The rest of the surface is irregular, presents numerous bulgings, and is studded with a growth of low warty osteophytes.

There are several cloacæ, especially on the anterior surface of the bone. The opening made by the trephine is on the anterior surface in the lower third of the bone. On making a section through the middle of the bone, the old shaft is seen to be in great part necrosed. About the centre of the bone, a large portion of its compact wall remains as a sequestrum. Throughout the lower half the original wall can still be traced, much reduced in thickness, and the cavity of the old shaft filled with cancellated tissue, with here and there necrosed portions of porous bone. The necrosis does not seem to have extended into the condyles. Lying immediately exterior to the original shaft, and connected with it in some places by a thin layer of cancellated structure, in others appearing as a continuation of the compact tissue, and in still others completely separated by a narrow space, is a layer of new-formed bone, varying in thickness from a quarter to half an inch, and of ivory-like density. This is again succeeded by a layer of cancellated tissue, which extends upwards from the lower third of the bone, and varies in thickness from a mere film to a third of an inch. The whole is enveloped by the irregular layer of compact bone forming the external surface of the shaft. Numerous small sinuses extend outwards from the central part of the bone. The opening made by the trephine extends into one of the sequestral cavities in the cancellated tissue. The articular surface of the condyles presents a carious, eroded appearance.

Case of a negro, æt. 30, admitted to the Pennsylvania Hospital, having strained his leg five years previously. Inflammation of the thigh and knee supervened. Twenty-two months before admission an abscess opened on the inside of the thigh. Soon after admission the femur was trephined in its lower third, and a large amount of pus evacuated. Erysipelas set in, and death occurred from exhaustion nineteen days after the operation.

Presented by Dr. T. G. MORRIS.

1122⁵.—Upper Third of Femur, showing results of Osteo-Myelitis, removed by Amputation at the Hip-Joint.

The specimen measures eight inches in length; the bone is light, its external surface very porous, with one large oval cloaca. A long, loose sequestrum is inclosed in the shaft, extending up into the neck of the femur, and which projected through the ulcerated capsular ligament. The head is ulcerated at its junction with the neck, and the shape of the latter is much altered. The acetabulum was quite healthy, the articular cartilages not being affected.

Case of E. D. Ulmer, æt. 21, admitted to the Pennsylvania Hospital January 22, 1866. His left thigh was fractured by a minie ball, October 19, 1864, and an attempt had been made to save the limb, which was followed by sloughing and the discharge of fragments of bone. Secondary hemorrhage occurred November 24, 1864, and amputation was performed in the middle third of the thigh. Fragments of bone were again discharged in March, 1865, when three inches of the end of the femur were amputated. The discharge continued, and January 22, 1866, another large hemor-

rhage took place; and again on February 15, sixteen months after the injury. Amputation at the hip-joint, by Dr. Morton, was followed by perfect recovery.

Dr. T. G. MORTON, *Am. Journ. Med. Sci.*, July, 1866, vol. lii. p. 17.

1123.—Lower Third of Right Femur, showing Necrosis.

There are several cloacæ in the condyles and anterior wall of the femur; the posterior wall, for fully three inches, having been chiselled away. At the point of amputation the bone is much indurated, but otherwise healthy.

Case of Frances —, æt. 19, a delicate, scrofulous girl, who had suffered several years with disease of the right femur, fistulous openings having formed, and several small pieces of necrosed bone discharged. Several sequestra were removed by operation; but the disease continuing, amputation was performed, by Dr. T. G. Morton, at the junction of the lower and middle thirds of the thigh. The patient made a very rapid recovery, with an excellent stump.

Presented by Dr. T. G. MORTON.

1124.—Femur, showing Exostosis.

The growth springs from the posterior surface of the femur, three inches above the external condyle. Its base is nearly two inches in length, half an inch in width, and the height of the growth about half an inch.

No history.

Presented by Dr. T. G. MORTON.

1124⁵.—Femur, showing Spongy Exostosis.

The growth has a base about three inches long by two inches in width, and is situated on the outer aspect of the anterior surface of the right femur, an inch and a half above the external condyle. The compact layer of the bone is expanded over the growth, forming a thin envelope. The structure of the exostosis itself is cancellous, with very large cells.

Obtained from dissecting-room. No history.

Presented by Dr. T. G. MORTON.

1125.—Resected Portion of Femur, from a Case of Ununited Fracture.

The specimen is about an inch and a half long, and shows that the femur had become conical, pointed, and its surface porous and eroded. Thick layers of ossified provisional callus are seen on its anterior and posterior surface. At the point of resection the bone appears healthy.

Case of a patient operated on by Dr. Randolph.

Presented by Dr. KIRKBRIDE.

1126.—Sequestrum from Femur after Amputation.

The specimen is five inches in length, for the lower three of which it forms a complete tube. At the lower end it involves the entire thickness of the compact wall; it then tapers off gradually, until at the upper end it presents but a very thin layer from the interior of the shaft. The form

of the specimen, therefore, is that of a conical tube. The bone is white, very dense, and its surface presents a great number of small, irregular depressions.

Case whose history is narrated below.

1127.—Femur and Tibia, showing effects of Chronic Synovitis.

The articular surface of the tibia is much destroyed, numerous shallow abscesses having extended into the cancellated tissue, the compact layer being almost destroyed. There are, however, three small islets surrounded by a depressed ring, the surfaces of which are compact and in places eburnated. The tuberosity of the bone is everywhere covered by a growth of spiculated and warty osteophytes. The femur presents precisely similar conditions, the periosteal disease having, however, extended on the posterior surface throughout the lower third of the bone, inducing thickening of the shaft.

Case of B. M., æt. 28, admitted to the Pennsylvania Hospital April 11, 1864, with extensive abscesses of the thigh, extending from the knee-joint, following a general contusion and laceration of the limb from a car-wheel passing over it three months previously. Amputation at the middle of the femur was performed April 16, 1864. The medullary canal was found to be enlarged, and the medulla much discolored and diseased. There was some necrosis of the stump, and on July 2, 1864, the above sequestrum was removed, after which the stump healed nicely.

1128.—Femur and Tibia, showing effects of Chronic Synovitis.

When removed, the synovial membrane of the knee-joint was destroyed to a great extent, the cartilages removed, and the compact layer of bone over the whole articular surface both of the tibia and femur destroyed, leaving a finely porous, cancellated surface.

Case of a man, æt. 40, admitted to the Pennsylvania Hospital, having received a fall upon the ice eighteen months previously. The knee had become swollen, tense, and very painful. On moving the patella on the condyles, crepitation was readily distinguished. He was emaciated, and diarrhœa soon set in. Amputation was performed about the middle of the femur, but death resulted in the second week, from pyæmia, the lungs containing large pyæmic abscesses.

1130.—Femur, showing Intra-Capsular Fracture.

There is an oblique fracture through the neck, beginning on its under surface, just at the insertion of the capsule, and extending upwards, backwards, and inwards, involving the postero-superior portion of the head. No union has been attempted, and there is indeed no appearance of any callus having been formed. There is a projecting mass of bone from the inter-trochanteric ridge, which is porous, rather friable, and at the time of removal was surrounded by ossifying callus. There has been some senile shortening of the neck.

Case of a man, æt. 70, admitted to the Pennsylvania Hospital, having fractured the neck of his femur by a fall down stairs. He lived thirty-eight days, dying from the effects of diarrhœa.

1131.—Femur, showing Double Fracture of the Neck.

One of the fractures extends from the under surface of the neck upwards and outwards to the tip of the trochanter major, following closely, in part, the line of insertion of the capsule. There is another fracture, which, commencing at the previous one, extends downwards and backwards, separating both trochanters from the shaft.

Case of John Lewis, æt. 74. The fracture was produced by a fall down four steps. Death resulted, and an abscess was found between the fragments.

Presented by Dr. PACKARD.

1132.—Femur, showing Fracture and Separation of Epiphysis.

The shaft presents a transverse fracture in its middle third. There has also been a separation of the condyloid epiphysis, which had not yet coossified with the shaft.

Case of a boy admitted to the Pennsylvania Hospital, having been run over by a railroad car. He died soon afterwards.

Presented by Dr. T. G. MORTON.

1133.—Femur, showing Comminuted Fracture.

The fracture has been very oblique, occupying the greater part of the middle third of the shaft. A large splinter has also been broken off from the lower end of the upper fragment. Two projecting masses of newly-formed bone are seen on the posterior surface of the upper fragment. The medullary cavity in both fragments is to a great extent filled with ossified endosteal callus. There is a thin layer of porous osteophyte extending on each fragment for several inches from the seat of the fracture. The epiphyses have not yet coossified.

Case of Edward McK., admitted to the Pennsylvania Hospital May 2, 1857, having received a fracture of the thigh, caused by a heavy stone falling upon him. At the end of six weeks he was allowed to get out of his bed, when he fell and refractured the bone. After it had again become perfectly firm, he was attacked with epileptiform convulsions, which ended in his death. While being removed to the dead-house, the bone was again refractured.

Presented by Dr. T. G. MORTON.

1133^s.—Right Femur, showing a Double Fracture.

The upper fracture runs obliquely from within outwards and from below upwards, about two inches below the trochanter major; the lower one being a jagged, slightly comminuted fracture about three inches above the condyles.

Case of Robert Jeffers, æt. 35, admitted to the Pennsylvania Hospital July 25, 1866, in an unconscious state, having fallen from a height into the river. There was a double fracture of the right femur, with three and a half inches shortening, and marked external angularity. He had been partially insane for a year past, and remained so until his death, ten days afterwards. At the autopsy, chronic cerebral meningitis was found.

1134.—Femur and Humerus, showing Compound Comminuted Fracture.

The humerus presents a slightly oblique fracture just below its surgical neck. The neck of the femur is completely separated from the shaft, the upper part of which, including both trochanters, is much comminuted, being broken into at least six pieces.

Case of a man admitted to the Pennsylvania Hospital, having received a severe railroad injury. The shock bore no proportion to the amount of injury inflicted. Amputation of both legs was necessitated, and he survived the operation several days. The above fractures had each caused extensive suppuration, involving the adjoining articulations.

1135.—Femur, showing Compound Comminuted Fracture.

The fracture involves the lower half of the shaft of the left femur. There are at least five fragments in all, one of which, three inches in length, has been driven into the cancellated structure within the shaft. There are also several very long fissured fractures, one extending into the external condyle, another running up the shaft. No effort at union has occurred, only a few small patches of porous, flaky osteophytes having formed on the surface of the fragments.

Case of P. S., æt. 65, admitted to the Pennsylvania Hospital in December, 1864, having been injured by the falling of a shed. There was great contusion and laceration of the surrounding parts. He survived the injury five weeks.

1136.—Femur, showing Comminuted and Fissured Fracture.

The fracture involves the upper half of the left femur. There is a large quadrilateral fragment, five inches in length, broken off from the anterior surface of the bone at the lower part of the upper half. The shaft is fractured obliquely at the junction of the upper and middle thirds, and there is a double longitudinal fracture extending into the upper fragment. One of these extends from the posterior surface of the bone nearly to the trochanter minor; the other extends obliquely over the anterior surface to the trochanter minor, and thence, along the inter-trochanteric ridge, into the trochanter major. There is a small amount of provisional callus on the upper fragments, but no reparative action is evident elsewhere.

Case of a man, æt. 30, admitted to the Pennsylvania Hospital February 18, 1857, having been injured by the fall of a bank of earth. There was an enormous abscess extending from the knee to the hip. Erysipelas set in and extended over the whole body, and he died from exhaustion, April 19, 1857.

Presented by Dr. T. G. MORTON.

1137.—Cast of a Recent Fracture of the Femur at the Lower Third, showing Anterior Angularity.

Presented by Dr. T. G. MORTON.

1138.—Femur, showing Separation of Condylod Epiphysis, resulting from Injury.

No history. The bones are evidently those of quite a young person.

1138¹⁰.—Left Femur, showing Transverse and Vertical Fracture of the Condyles.

The condyles are divided from the shaft by a transverse fracture an inch and a half above the joint, and there is also a vertical fracture which completely separates the condyles from each other.

Case of —, æt. 19, a brakeman, admitted to the Pennsylvania Hospital in October, 1865. His left leg had been caught between the bumpers of two cars, producing frightful contusion of the tissues about the knee, rupture of the popliteal artery, and fracture of the femur. Amputation was performed by Dr. Morton in the middle third of the thigh, and the patient did well for some time, but died from exhaustion in the third week.

1139.—Condyles of Femur, showing Compound Comminuted Fracture.

There has been an oblique fracture separating the condyles from the shaft, and a second vertical fracture has completely separated the two condyles from each other, extending from the previous fracture into the knee-joint.

Case of a man thrown from a wagon going at full speed, and striking upon his knee. There was overlapping of the upper fragment for about two inches.

1140.—Femur, showing United Fracture.

The fracture has been seated in the upper part of the middle third. Firm union has ensued, with, however, a good deal of anterior and external angularity. The provisional callus has been almost entirely removed, and the shaft is somewhat altered in shape, being flattened laterally.

Removed at the autopsy of a man who died of delirium tremens in the Pennsylvania Hospital.

Presented by Dr. T. G. MORTON.

1140¹⁰.—Femur, showing United Fracture with great Deformity.

The fracture has been seated about the middle of the shaft, and was, apparently, slightly oblique from above downwards. Union has, however, occurred, with overlapping of the upper fragment to the extent of at least three and a half inches. This union has been effected by means of provisional callus, which has united the upper surface of the lower fragment to the under surface of the upper fragment. The band of new-formed bone is very dense in structure, is nearly two inches long, and almost as wide as the shaft of the bone itself. It extends on the lower fragment from the point of fracture downwards, but its attachment to the upper fragment begins at a point nearly two inches above the seat of fracture, so that the

lower end of the upper fragment appears as a projecting point forming an angle of about thirty degrees with the line of the lower fragment. The free ends of both fragments are rounded off, and, to a great extent, covered with compact bone. The only evidence of any necrosis having occurred is a small oval cloaca on the outer surface of the lower fragment, near the seat of fracture.

No history.

Presented by Dr. T. S. KIRKBRIDE.

1140²⁰.—Left Femur of a Chicken, showing United Fracture.

The fracture has been oblique, and seated about the middle of the shaft. The lower fragment has over-ridden the upper, and union has occurred, causing moderate angular deformity. The compact wall of the lower fragment which thus crossed the medullary cavity of the upper is undergoing cancellation, while the free end of the lower fragment is closed by a newly-formed compact layer.

Presented by Dr. W. PEPPER.

1141.—Femur, showing results of a Compound Comminuted Fracture.

The bone is diseased from the condyles to within two inches of the lesser trochanter. The shaft has been fractured obliquely, with much comminution, and union has taken place by the formation of a very large amount of dense bony structure, which projects in spurs and ridges. There is a large, irregular cavity, bridged over in places by newly-formed bone which still contains several large sequestra. One or two small fragments of lead are still imbedded in the bone.

Case of James McGeehen, *et. 48*, admitted to the Pennsylvania Hospital April 9, 1866. He was wounded by a minie ball at Gettysburg, July 1, 1863, the ball traversing the right thigh and comminuting the shaft of the femur. The thigh became much thickened and heavy, the original wound closed, but numerous fistulous openings formed during the next two years, discharging not less than fifty small pieces of necrosed bone, and the discharge of pus averaged a gill daily. Amputation at the hip-joint was performed April 21, 1866, by Dr. D. Hayes Agnew. The patient had not an unpleasant symptom, and the union of the flaps was almost complete, when he died suddenly, on the twelfth day, from a small hemorrhage following the separation of the ligature on the femoral artery.

Case X. in Dr. T. G. MORRIS's article, *Am. Journ. Med. Sci.*, July, 1866.

1142.—Femur, Three Years after Amputation just above Condyles.

The upper part of the shaft is healthy. The lower end is protected by a thin layer of compact bone; the cancellated tissue adjoining appearing healthy. There is a rim of new bone surrounding the end, extending up the shaft from a quarter of an inch to an inch and a half. The skin was adherent over the end of the stump, and blended with dense fibrous tissue, into which the vessels, nerves, and tendons passed and became

lost. The femoral artery was patulous to within an inch and a quarter from the end of the stump.

Case of William Busch, æt. 40, admitted to the Pennsylvania Hospital with acute infiltrated tubercle, which caused his death in less than two weeks after admission. He received a gunshot wound in battle, three years previously, for which amputation of the thigh in its lower fifth was performed. He made a rapid recovery, and had an excellent stump.

1143.—Cast of Stump of Thigh, after Amputation by Circular Flaps.

1143⁵.—Cast of Thigh, after Amputation by Circular Flaps.

1143¹⁰.—Cast of Thigh, after Amputation by Circular Flaps.

1144.—Both Patellæ, showing Comminuted Fracture.

The left patella is more comminuted than the right, the fragments being only loosely held together by shreds of fibrous tissue. The capsule of the knee-joint was opened on both sides, and the joint distended with bloody serum. There was no fracture of any of the bones of the legs.

Case of a negro man, colored, admitted to the Pennsylvania Hospital, who had fallen from a considerable height, alighting, it is thought, directly upon his knees. There was also a fracture of the skull, from the effects of which he died in the course of twenty-four hours.

1145.—Patella, showing Fracture united by Ligament.

The fracture has been transverse, about the middle of the bone. The fragments are covered by a thick membrane. A broad fibrous layer, an inch and a quarter wide, unites the two fragments, being attached to their anterior surface. There is also a strong but thin band passing between their posterior surface. At the outer side of the patella there are two bony nodules springing from each fractured surface; these are evidently new-formed bone, and are almost in contact with each other, though no bony union has occurred between them. They were, however, firmly bound together by ligament. The degree of separation at the outside of the joint is not more than half an inch; at the inside it amounts to fully one inch.

Removed at the autopsy of an old negro who had fractured his patella eleven years previously.

1146.—Patella, showing Comminuted Fracture with Ligamentous Union.

The bone has been fractured into five fragments, which are all bound together by a thin, broad layer of fibrous tissue. The distance between the upper and lower fragments is fully three and a half inches, the three other fragments occupying intermediate positions. The surfaces of the fragments have been a good deal rounded off, but are still quite irregular.

Removed at the autopsy of a patient who had twice fractured his patella. He had great difficulty in walking.

Presented by Dr. T. G. MORTON.

1149.—Tibia, showing Abscess in Head.

The abscess is seated about an inch and a half below the articular surface of the tibia, is irregularly triangular in shape, measuring nearly two inches in length, and varying in width from three-quarters of an inch to an inch and a half. There is an orifice about half an inch in diameter, with a rounded lip, opening on the anterior surface of the tibia an inch and a half below the knee. The internal surface of the abscess is very irregular and porous. The surrounding cancellated tissue throughout the entire head and for at least three inches down the shaft has undergone induration, and become in places as dense as ivory. The same induration, in a less marked degree, extends almost throughout the length of the shaft, the cancellated tissue being more dense and the compact layer thicker than natural. The periosteum is much thickened, and the external surface of the bone presents a copious formation of leafy and spiculated osteophytes. There is no appearance of any disease having existed in the knee-joint. There is some antero-posterior curvature of the bone, which is most marked in its upper fourth.

Case of a colored woman, æt. 64, who for forty years had been troubled with her left leg, and at various times ulcers had formed upon it. On admission, the leg was much swollen, there were two ulcers above the internal malleolus, and in front, just below the knee, a sinus, communicating with dead bone, through which offensive pus was discharged. She was much reduced in health, and could obtain little or no sleep. Amputation was performed, but death resulted from gangrene.

Presented by Dr. T. G. MORRIS.

1150.—Tibia, showing Syphilitic Disease.

There has been no affection of either the knee or ankle-joint. The entire shaft of the bone is, however, involved, excepting the lower fourth of the outer surface, and a triangular portion of the posterior surface, near its upper part. The diseased bone is of a darker color than natural, and its surface is coarsely porous, the compact layer having undergone cancellation. There are in several places, also, slight bulgings of the surface. In the middle third of the spine of the tibia there are three patches where the outer surface of the bone is destroyed, and irregular ulcers, with depressed and coarsely porous bases, have formed. Nodes previously existed at these points.

Removed from a patient who died in the Pennsylvania Hospital. No history.

1151.—Tibia, showing Syphilitic Disease.

Neither of its articular surfaces appears to have been affected; the entire shaft has, however, been involved, except the upper part of the posterior surface. The bone is discolored, and the surface coarsely porous. Along the spine of the tibia, in its middle third, are two oval, depressed, ulcer-like patches, with irregular, gnawed bottoms. There are several bulgings of the bone, especially along its spine; and at about two inches above the

internal malleolus there is a local hyperostosis which causes an oval swelling of the bone two and a half inches in length by an inch and a half in width, and three-quarters of an inch high. The surface of this and of the adjacent bone is unusually porous, the bone being hard and the apertures very coarse. A large fragment of bone in the interior of this swelling has become necrosed, and communicates with the surface by an irregular opening.

Removed from a patient who died in the Pennsylvania Hospital. No history.

1152.—Tibia, showing effects of Chronic Synovitis of Knee-Joint.

The principal disease is seated on the inner half of the head of the bone; where the compact layer of the articulating surface is removed, and the surface, instead, presents a finely porous, gnawed, irregular character. The inner half of the head, for the space of an inch and a half below the joint, presents a growth of warty osteophytes.

No history.

Presented by Dr. T. G. MORTON.

1153.—Sequestrum, from Tibia after Fracture.

The specimen is about three and a half inches long. It includes the entire thickness of the shaft of the tibia for about one inch, and is then bevelled off so as to finally include only the spine. The bone is slightly discolored, and over its lower half has an eroded appearance.

Case of a patient admitted to the Pennsylvania Hospital with compound comminuted fracture of the tibia. Suppuration took place, and, upon an incision being made over the seat of the fracture three weeks after its occurrence, a large discharge of pus followed, and this sequestrum was removed.

1154.—Medullary Cancer of Tibia.

The compact wall of the tibia, on its posterior surface, for about three inches below the knee-joint, is to a great extent destroyed, and the cancellated tissue throughout the posterior half of the head is infiltrated by the morbid growth. The epiphysis is involved only to a small degree at its posterior part.

Case of a lad, æt. 17, who injured his knee by a fall in August, 1860. Pain continued until March, 1861, when a swelling made its appearance at the posterior part, and attained the size of a large orange; this opened and discharged, and a fungous growth made its appearance. The limb became œdematous and painful. Amputation was performed June 30, 1861, and a good cure resulted. The arteries around the knee were much enlarged, and a large encephaloid mass sprang from the posterior part of the head of the tibia. Microscopic examination confirmed the nature of the growth.

1156.—Fibula, showing Syphilitic Disease.

There are numerous patches, of irregular size, quite closely set over the shaft, and at these points the bone is frequently bulging, and its surface coarsely porous and worm-eaten in appearance. At several points sinuses are seen, which communicate with fragments of necrosed bone in the interior of the shaft.

Removed from a patient in the Pennsylvania Hospital. No history.

1158.—Both Tibiæ and Fibulæ, showing Curvature from Rickets.

Both sets of bones show a moderate amount of antero-posterior curvature. The tibiæ are remarkably flattened laterally, being scarcely half an inch in width throughout the greater part of their extent. The heads and lower parts are comparatively well formed. There is not much bulging of the bones at the epiphysial lines. The shafts of the fibulæ, for about their upper and lower three inches, are very thin; the intervening portions are expanded into broad, thin, sabre-like blades.

Removed from an adult negro. No history.

Presented by Dr. T. G. MORTON.

1159.—Tibia and Fibula, showing Antero-Posterior Curvature from Rickets.

The bones are bent so as to form a right angle, the curvature having occurred at the middle of the shaft. They are also flattened laterally to a remarkable extent, the tibia being rather less than half an inch in thickness throughout its middle third, while the fibula forms a sabre-like blade, not more than one-tenth of an inch in thickness anteriorly, while posteriorly it presents a keen, cutting edge. The antero-posterior diameter of the tibia at the point of curvature is an inch and a half; that of the fibula, three-quarters of an inch. The spine of the tibia at this point presents an irregularly depressed and eroded-looking surface. The shafts of the bones, in their lower fifth, are thin and rounded. The articulating surfaces are well formed. The epiphysis of the tibia has not yet coossified with the shaft. At the point where the bones have been sawed off in the upper third, the tibia presents a well-formed, compact layer of relatively normal thickness. The fibula is a mere lamina of compact tissue.

Case of S. W. Albert, æt. 19, admitted to the Pennsylvania Hospital March 13, 1862. The deformity above described had existed in both legs since infancy. The patient had walked entirely on his knees, and the shins had been kept constantly ulcerated. The curvature was somewhat more marked in the left leg than in the right. It was stated that he had had as many as twelve or fifteen fractures in each leg, and several in the thighs, some of which had occurred during the first weeks of infancy. All of the fractures had, however, united remarkably quickly, and no positive trace of any such occurrence can be detected in the specimen. Amputation was performed, to enable him to wear an artificial limb, and thus restore him to the erect posture. He suffered much constitutional irritation after the operation, but ultimately recovered.

1159⁵.—Cast of the above Specimen.

Presented by Dr. T. G. MORTON.

1160.—Tibia, showing Necrosis, with External Hyperostosis.

The superior epiphysis has not yet united with the shaft. Its upper surface presents a coral-like appearance, from the very numerous irregular depressions which have extended into it. The surface is in parts compact,

and in parts porous. The entire shaft is very much enlarged, irregularly bulging, and presents a large number of sinuses, of sizes varying from a minute orifice to an opening several inches in length, which communicate with portions of the old shaft, which seems to have undergone almost complete necrosis and to have been in great part removed. The external surface of the bone is studded with large vascular pores, is in places compact, in others finely cancellated. The upper half of the old shaft still remains imbedded in the new-formed bone, and evidently had lost its vitality to a great extent. The fibula presents very little evidence of disease.

Case of J. E., æt. 15, admitted to the Pennsylvania Hospital June 9, 1864, with ankylosis of the knee and great enlargement of the bones of the leg, resulting from a fall one year previously. The patient was of obscure origin, and probably had a syphilitic taint. Amputation was performed, with good result.

1161.—Tibia and Fibula, showing Syphilitic Osteophytes.

The fibula presents the chief amount of disease. Its entire shaft is irregularly thickened, and its surface covered by new-formed bony ridges and spiculated or reticulated lamellar osteophytes. The adjoining ridge of the tibia and part of its posterior surface also present a growth of osteophytes at these parts, and over the whole lower third of the bone the vascular pores are much enlarged.

Removed at the autopsy of a patient who died in the Pennsylvania Hospital, having previously suffered from syphilis.

1162.—Tibia and Fibula, showing Osteophytes.

The tibia is slightly enlarged in its middle third; and its posterior surface, throughout its entire extent, is covered by a growth of spiculated or laminated osteophytes. On its anterior surface, throughout the greater part of its upper half, there is a growth of close-set villous osteophytes. The fibula, throughout its entire extent, presents a remarkable development of spiculated osteophytes. These in some places have thick bases and are pyramidal in shape, in others they are more conical and blunt-pointed. There are, also, many delicate, needle-like osteophytes, some of which are almost an inch in length. In several places the extremities of these are connected by bony bridges, the length of which in one place is fully an inch and a half.

Case of a woman, æt. 60, who had suffered from an indolent ulcer of the leg, occupying nearly its entire circumference, for thirty years. Amputation was performed, and death took place on the eleventh day. The autopsy revealed "fibroid" degeneration of the kidneys and liver.

Presented by Dr. T. G. MORTON.

1163.—Bones of Lower Extremity, showing Abscess in the Head and Shaft of Tibia, with Hypertrophy of the Bone and extensive Growth of Osteophytes.

The articulating surface of the condyles of the femur presents several large patches where the compact layer has been destroyed, and the surface

now presents an irregular, eroded appearance. The tibia and fibula show a moderate degree of rickety antero-posterior curvature at the junction of their middle and lower thirds. The bones are flattened laterally, and widened antero-posteriorly. There is a cavity four inches and a half long by an inch and a half wide, running from the spine of the tibia, at the junction of its middle and upper thirds, upwards and backwards almost to the epiphysial line. This cavity communicates by one small round opening with the external surface of the bone, an inch and a half below the knee. Anteriorly, however, the cavity is freely open, the spine of the tibia being destroyed for an extent of three and a half inches. There are also three small round openings near this principal one. The inner surface of the wall of the cavity is formed of dense cancellated bone. The upper four-fifths of the shaft are enormously hypertrophied, and very heavy. The anterior surface of the bone presents large vascular pores, giving it a coarsely reticulated character. The posterior surface is covered, to a great extent, by a luxuriant growth of osteophytes, some of which appear as broad-based spicules three-quarters of an inch long, while others have a more mushroom-like shape. The inferior fifth of the bone is comparatively healthy. The fibula also presents an extensive growth of osteophytes over its upper two-thirds. The upper articulating surface of the tibia is comparatively little involved, the compact layer being only destroyed in a few patches.

Case of a negro, *set.* 41, who had had disease of the limb for twenty years. The leg had grown very large, and an ulcer had existed over the spine of the tibia during all this time. Spicules of bone had from time to time been removed through the ulcerated surface. Amputation was performed by Dr. Joseph Pancoast, and the patient made a good recovery.

1164.—Necrosed Fragments from the Tibia.

The largest of these is three and a half inches long, and involves about one-third of the external surface of the shaft. The bone is white and dense. The edges of the necrosed portions are very irregular, and present numerous perforations, giving the bone in this part a reticulated character.

Case of a boy admitted to the Pennsylvania Hospital with necrosis of the tibia.

1165.—Tibia and Fibula, showing Necrosis after Amputation.

The operation has been performed an inch and a half below the tuberosity. Five months have elapsed since its performance. The end of the fibula has been closed in, and a growth of osteophytes extends up the bone about one inch. The end of the tibia presents scarcely a trace of reparative action, and there is a conical hole involving three-fourths of the cancellated structure of the bone, and extending about an inch and a half above the shaft. The cancellated tissue throughout this space has become necrosed and discharged. The compact bone of the posterior wall, for an inch above the

end, has a porous, scaly appearance. No necrosis of the compact layer has occurred.

No history.

1168.—Tibia, showing Oblique Fracture at Lower Fourth.

There is also a fissured fracture extending two inches downwards and outwards.

Case of an old man admitted to the Pennsylvania Hospital. Death resulted, from constitutional irritation, seventeen days after the injury.

1169.—Tibia, showing Recent Fracture of Malleolus, and also Fracture of Astragalus.

The line of fracture is slightly oblique, and has separated the extreme tip of the malleolus, a fragment about half an inch in diameter, which still remains attached to the astragalus. There is also a fracture of the astragalus, which extends through the bone just anterior to its articulating surface for the tibia, in an oblique direction from above downwards and backwards.

No history.

Presented by Dr. T. G. MORTON.

1170.—Tibia, showing Oblique Fracture united.

The fracture has been a very oblique one, beginning at the upper part of the lower fifth and running upwards and outwards. Union has occurred without shortening or displacement, and it is only possible to recognize the seat of fracture by a shallow depression on the outside of the bone, and a slightly roughened transverse ridge on the inside.

Case treated in the Pennsylvania Hospital. No history.

1172.—Fibula, showing United Fracture.

The fracture has been a very oblique one, beginning one inch above the malleolus. Firm union of the fragments has occurred, with but little displacement, and a very large amount of callus has also been effused between the tibia and fibula, which has led to the firm coossification of these bones.

No history.

Presented by Dr. T. G. MORTON.

1173.—Tibia and Fibula, showing Exostoses and a Recent Fracture.

The exostoses are situated at the lower fifth of the bones. That on the tibia is a low, broad-based, mushroom-like growth, about a third of an inch high, and with a rough, irregular surface. There is also a ridge, elevated and spiculated, running from this to the posterior part of the ankle-joint. The exostosis on the fibula is directly opposite to that on the tibia, and has somewhat the shape of a shallow cup, and partially incloses the tibial exostosis, thus forming a kind of ball and socket joint. The tibia presents an oblique fracture at its lower fifth, running from without inwards, and

from below upwards. The fibula is fractured at its upper fifth, and quite a large splinter of the bone is broken off.

Case of an adult in the Pennsylvania Hospital. Death resulted from the effects of the recent fracture.

1173^s.—Tibia and Fibula, showing Recent Fracture.

The tibia is fractured at the junction of the middle and lower thirds, the line of fracture being V-shaped, the branches of the fracture each being about three-quarters of an inch long. The fibula presents two fractures in its lower half, one transverse, the other slightly oblique.

Case of a boy who died in the Pennsylvania Hospital from the effects of injuries received on a railroad.

Presented by Dr. T. G. MORTON.

1174.—Tibia and Fibula, showing Comminuted Fracture.

The shaft of the tibia presents three nearly equidistant, slightly oblique fractures, and several small fragments have been broken off from the bone. There are also three equidistant fractures of the shaft of the fibula, the upper two of which are oblique, the other transverse.

No history.

1175.—Tibia and Fibula, showing Fracture partially united.

There has been a comminuted fracture at the lower fifth of the tibia. The fibula has also been broken a little above this point. Partial union of the upper end of the lower fragments of the tibia and fibula has occurred. The comminuted fragments of the tibia, white and evidently necrosed, are either imbedded in the lower fragment, or else attached to it by fibrous tissue. There has also been some necrosis of the lower end of the upper fragment of the tibia. The fibula has also been fractured obliquely at its upper fifth, and union has occurred, with overlapping for at least an inch and a half.

Case of a man who died in the Pennsylvania Hospital from erysipelas, six weeks after the receipt of the injury, which was from a kick by a man.

1176.—Tibia and Fibula, showing United Fracture.

The tibia has been broken obliquely from within outwards and below upwards, about two inches above the ankle-joint; and the fibula in the same direction, three inches higher. Firm union has occurred, with marked internal angularity, and about an inch and a half of overlapping. The ends of the fragments of the tibia are rounded off, and covered in by compact bone. There is but one small sinus, which extends from the end of the upper fragment into the interior of the shaft. On making a section, the opposed compact layers of the tibia are seen to have undergone complete cancellation. The ends of the fragments of the fibula are also closed in by compact bone, but are less rounded off. On making a section, the medullary

cavity is found to be still interrupted, the inner compact layer of the lower fragment yet remaining. The callus, however, which unites this to the upper fragment is thoroughly cancellated, and the compact wall of the upper fragment is reduced to a very thin layer. There is no coossification of the tibia and fibula.

Case of a man, æt. 60, who died from the effects of a recent fracture of the left leg, caused by the fall of a bank of earth. Death took place on the seventeenth day, with no repair of the recent fracture. No history of the fracture of the right leg.

Presented by Dr. T. G. MORTON.

1177.—Tibia and Fibula, showing Comminuted Fracture.

The fracture has been an oblique one, situated at the junction of the middle and upper thirds. The specimen presents seven fragments of varying sizes, the largest three inches long, which have been separated from the shafts of the two bones.

No history.

1178.—Tibia and Fibula, showing Compound Comminuted Fracture.

The tibia is broken about one inch above the malleolus; the fracture is oblique from above downwards and from before backwards. Four fragments, principally from the posterior wall, have been broken off. The fibula is fractured transversely, four inches above the ankle-joint.

No history.

1179.—Tibia and Fibula, showing Fracture of Malleoli united and with Necrosis.

The line of fracture appears to have been such as to separate both malleoli, with a part of the articulating surface of the tibia, thus passing through the joint. Union has occurred in the following manner: The shafts of the tibia and fibula have firmly coossified for an inch above the joint. The malleolus of the tibia is separated from its original attachment, the rim of the articulating surface, which was broken off with it, being, however, attached to the tibia by a thick, irregular mass of new bone. The malleolus of the fibula has also united, with some posterior displacement. The joint has become involved in destructive inflammation, causing a cup-shaped excavation in the lower end of the tibia, in which lies loose a large porotus sequestrum fully an inch in all its diameters, the lower surface being the terminal compact layer of the tibia.

Case of a man, æt. 64, of intemperate habits. Disease of the joint followed the fracture. Secondary amputation was performed one year afterwards, but resulted in death.

1180.—Tibia and Fibula, showing Stump eleven weeks after Amputation.

The ends of the bone are rounded off, and covered in by nodulated,

compact bony tissue, which in the tibia projects over the edge of the bone in the form of a narrow reverted lip. The surface of the bones, for about three inches above the point of amputation, is coarsely porous and roughened, and a growth of spiculated osteophytes extends up the tibia for this distance.

Case of a colored man, *æt.* 21, admitted to the Pennsylvania Hospital February 26, 1863, with his feet frosted so severely that amputation of both was necessary. The first was amputated by Teale's method, eleven weeks before the second; the stump healed very nicely. Death occurred soon after the second amputation, from acute miliary tubercle of the lungs.

1181.—Tibia and Fibula, showing Compound Fracture, with extensive Ulcer of Soft Parts.

The specimen shows an ulcer four inches long and two inches wide, covered with flabby granulations, at the lower part of which the fractured tibia and fibula project above the surface. The bones are discolored, and imbedded in granulations.

Case of a patient admitted to the Pennsylvania Hospital with compound fracture of the leg. Amputation was performed one year subsequently.

1184.—Bones of Foot Articulated (normal).

1185.—Cast of a Dissection showing the Tendons of Foot.

1186.—Foot converted into Adipocere.

The conversion is complete, affecting skin, muscle, and bone. The skin remains as a brownish, flaky, friable, slightly greasy covering. The tendons appear as loose, shreddy bands, rather easily broken. The muscles and fat form a white crumbling mass, with a peculiar unctuous, greasy feel. The cancellated structure of the bones is filled with a similar substance, and the entire bone is softened, so that it can be cut without much force.

Removed from a very old graveyard and presented by Dr. T. G. MORTON.

1187.—Caries of Ankle.

The articulating cartilages were destroyed, and there is superficial caries of the lower ends of the tibia and fibula, with periosteal disease of the latter bone up to the point of amputation. All the bones of the tarsus, and the heads of the metatarsal bones, are involved; they are very light, and present a porous, worm-eaten appearance, without marked loss of substance.

Case of a male adult, colored, who was admitted to the Pennsylvania Hospital, having suffered for many years with caries of the right ankle. Several fistulous openings had formed, communicating with the bones. Amputation was performed in the middle third of the leg by Dr. Hewson, and the patient made a good recovery.

1188.—Cast of Foot after Removal of Os Calcis.

The arch of the foot is impaired and the sole flattened, and the internal

malleolus is much lower than natural. The incision through which the os calcis was removed is seen as a depressed cicatrix, with some wrinkling of the adjacent tissues. It is a semicircular incision extending from behind one malleolus to the other.

The operation was performed for a gunshot wound.

Presented by Dr. T. G. MORTON.

1189.—Bones of Leg and Foot, showing Fracture of Tibia and Fibula, and Compound Fracture of Os Calcis and Astragalus.

The malleolus of the tibia is broken off, and there is a transverse but fissured fracture of the fibula two inches above the malleolus. A small piece has been broken off from the postero-inferior part of the astragalus, and an irregular transverse fracture of the os calcis has occurred half an inch below its articulation with the astragalus.

Case of a man injured by a fall from a second-story window. He refused amputation. Erysipelas and sloughing followed; a large abscess formed on the inner side of the tarsus; secondary hemorrhage occurred, and the anterior tibial artery was tied by Dr. Morton. Death occurred from pyæmia in the fourth week.

Presented by Dr. T. G. MORTON.

1190.—Os Calcis, showing Fracture.

There is a slightly oblique fracture near the middle of the bone, and a fissured split runs from this fracture posteriorly. A thin lamina has also been broken off from the postero-inferior surface of the bone.

No history.

1191.—Bones of Normal Foot, demonstrating Pirogoff's Method of Amputation through the Os Calcis and lower ends of the Tibia and Fibula.

1192.—Cast, after Amputation by Pirogoff's Method, showing excellent Union, with good round Stump.

Pennsylvania Hospital.

1193.—Cast of Foot of a Child after Pirogoff's Method of Amputation, showing excellent Stump.

Pennsylvania Hospital.

1194.—Cast of Foot after Recovery from Amputation by Chopart's Method.

The operation was performed on account of a railroad injury, and the patient, a young lad, made an excellent recovery and had a useful foot.

Pennsylvania Hospital.

1195.—Cast of Foot after Amputation by Chopart's Method. (See No. 1197.)

Presented by Dr. T. G. MORTON.

1197.—Foot Crushed Off.

The metatarsal bones have all been fractured near their base, and the soft parts so crushed and lacerated that the anterior portion of the foot was actually separated.

Case of a young man, æt. 18, admitted to the Pennsylvania Hospital, who, while working in a machine-shop, had two tons of iron fall upon his foot. Amputation was performed by Chopart's method, and recovery ensued, with a very useful foot. (See No. 1195.)

Pennsylvania Hospital.

JOINTS, TENDONS, BURSE, &c.**1200.—Bony Anchylosis of Shoulder-Joint.**

Adhesion has occurred between the lower part of the head of the humerus and the glenoid cavity. The head of the bone is flattened at this part, and the extent of its attachment to the glenoid cavity is about one inch by three-quarters of an inch. The remainder of the head presents patches of superficial disease, and there is a large growth of osteophytes on the inferior and anterior parts of the neck of the humerus. The scapula presents but little evidence of disease.

From a case of rheumatic arthritis. No history.

1202.—Cast of Dislocation of the Sternal End of the Clavicle, showing Displacement forwards and upwards.

Presented by Dr. T. G. MORTON.

1203.—Cast of Dislocation (recent) of the Humerus downwards and forwards.**1204.—Elbow-Joint, showing Bony Anchylosis.**

There seems to be little if any disease of the shafts of the bones, but the joint has been completely obliterated by the formation of a large amount of bony matter between the articulating surfaces. The joint is thus much enlarged, the increase being most marked in the ulna and internal condyle of the humerus. There are no osteophytes projecting at any point about the joint. The forearm is firmly fixed at an angle of 135 degrees with the arm.

From a case of rheumatic arthritis.

Presented by Dr. G. H. HUMPHREYS.

1205.—Cast of Contraction of Forearm of Child from extensive Burns, showing strong Flexion of Hand upon Forearm, and also of Elbow-Joint.

The patient was operated on with some benefit by division of the bands at the elbow and wrist.

Presented by Dr. T. G. MORTON.

1206.—Arm lacerated by being caught above the Middle of the Humerus in a heavy Stamping-Machine.

The skin is torn off down to the wrist, and turned over like a cuff, the superficial veins and nerves being still attached above and below. The muscles, especially of the forearm, have been stamped and crushed into a mere shreddy pulp.

The specimen was removed in the Pennsylvania Hospital, by amputation near the shoulder-joint, from a lad engaged in a cracker bakery.

1207.—Loose Cartilages from Elbow-Joint.

There are four in number, one of them exceedingly small, the largest one being oval and two-thirds of an inch in its long diameter. They have a hard, bony central portion.

Found in the sigmoid cavity of the humerus, in a patient who died from syphilis.
Presented by Dr. T. G. MORRIS.

1208.—Left Hand, showing Deformity resulting from a severe Injury.

The wrist-joint is ankylosed, with the metacarpus flexed at a right angle. The thumb and index-finger have been removed, and the remaining fingers are drawn together at their bases, and immovably extended to a right angle with the metacarpal bones. The skin of the fingers is corrugated; that of the entire metacarpal region is extremely indurated and contracted, and there is a large ulcer over the prominent part of the carpus.

The specimen was removed in the Pennsylvania Hospital, by amputation in the lower third of the forearm, from a young Virginian who had received a severe injury of the left hand some years previously.

1209.—Tendon of the Flexor Longus Pollicis, torn out.

The last phalanx of the thumb has been crushed off, and the entire tendon, about ten inches in length, dragged out, with a portion of its muscular head attached.

Case of a man, æt. 40, admitted to the Pennsylvania Hospital, who, while resting his hand on a piece of machinery, had the end of his thumb caught in the revolving eccentric. He recovered without a bad symptom.

1209^s.—Tendon of the Extensor Proprius Pollicis, torn out.

The tendon is torn out from its origin, is fully nine inches in length, and shows some muscular tissue at its upper extremity.

Case of a patient, admitted to the Pennsylvania Hospital, whose thumb had been seized by the teeth of some adversary, the last phalanx bitten off, and the tendon of the extensor proprius, still attached to the phalanx, dragged out.

1210.—Ankylosis of Hip, with Absorption of Acetabulum and Head of Femur.

The femur is firmly ankylosed to the pelvis in such a manner that its shaft is fixed in a direction parallel to the horizontal ramus of the pubis.

The neck and head have been completely absorbed, so that the greater trochanter lies immediately in contact with the seat of the acetabulum. There are several sinuses leading through the mass of new-formed bone which unites the femur and pelvis, and communicating with necrosed fragments probably of the head or neck of the femur. The bottom of the acetabulum has been destroyed, so that an oval opening one inch in its long diameter has been made into the pelvic cavity. This opening also connects with the necrosed fragments of the head of the femur. The surrounding portions of the ischium present a growth of spiculated osteophytes. The entire venter of the ilium is rendered convex from the development of thick laminae of new bone. Its crest is very much thickened, and the anterior superior spinous process terminates in a number of spiculated osteophytes. There are a few small osteophytes on the horizontal ramus of the pubis and around the margin of the obturator foramen.

Case of a woman, æt. 80, who had been a cripple for many years. No other history. Pennsylvania Hospital. Presented by Dr. T. G. MORTON.

1211.—Dislocation of Femur on the Dorsum Ilii, of eighteen years' standing.

The acetabulum has assumed a triangular shape, with the apex directed upwards. The edges are rounded, and the cavity quite shallow. The head of the femur presents a triangular flattened surface over its under half, and rests in a depression on the dorsum of the ilium just above the acetabulum and behind the anterior inferior spinous process, where it was held in position by a fibrous membrane resembling a capsular ligament. No signs of disease of the bones are visible, except the absorption above described.

Case of H. N., æt. 20, admitted to the Pennsylvania Hospital September 2, 1857. He was admitted for scrofulous disease of the hand and wrist, for which amputation was performed by Dr. Pancoast, but he died soon after from rapid tuberculosis. The dislocation described above was produced at the age of two years, by a fall.

Presented by Dr. T. G. MORTON.

1211⁵.—Cast of the above Specimen.

Presented by Dr. T. G. MORTON.

1212.—Cast of Rupture of Ligamentum Patellæ, with Fracture of the Condyles of Femur, with Lateral Dislocation.

Presented by Dr. FLEMING.

1212⁵.—Rupture of Ligament of Patella.

The rupture has occurred close to the patella. The man from whom it was removed died from inflammation of the knee-joint.

Pennsylvania Hospital.

1214.—Fibrous Tumor from Ligament of Patella.

The tumor is of a flattened, spheroidal shape, two inches in diameter, and, on section, presents a dense fibrous structure. The specimen was

removed from the left leg after death, and was developed immediately over the insertion of the ligament.

Case of a patient who died in the Pennsylvania Hospital from droopy. A similar tumor was found on the right leg. (See No. 1215.)

1215.—Fibrous Tumor from the Ligament of Patella.

The tumor is nearly an inch and a half in diameter, of dense fibrous structure, and was found over the insertion of the right ligamentum patellæ in the case which furnished No. 1214.

1216.—Cast of a Contracted Knee.

Case of a patient in the Pennsylvania Hospital, whose knee was flexed at a right angle, owing to a contraction of the tendons; these were afterwards divided, and the limb straightened.

1217.—Cast of Enlarged Bursa Patellæ.

1219.—Talipes Varus (Cast).

1220.—Dislocation of Astragalus (Cast).

A depressed, puckered cicatrix is seen in front of the external malleolus. There is marked increased width of the ankle-joint and shortening of the foot.

Case of a boy admitted to the Pennsylvania Hospital, having fallen from a height, alighting upon his feet. The left astragalus was partially luxated. Inflammation and suppuration followed, and small pieces of bone came away. After admission, a larger abscess formed, which was opened, and the astragalus removed entire. A good recovery followed, and the boy was discharged cured. The principal shortening took place in the length of the foot, which became three-quarters of an inch shorter than its fellow. There was not more than a quarter of an inch difference in the length of the two limbs. Some motion existed at the joint, and the foot had a tendency to turn inwards. The cast was taken at the time of his discharge.

1220^s.—Astragalus Discharged by Suppuration. (See No. 1220.)

The under part of the bone has been a good deal destroyed by carious disease, and presents an irregular excavation occupying two-thirds of its extent. The other surfaces of the bone are smooth, and do not present any evidences of disease.

Presented by Dr. HUTCHINSON.

1222. — Anchylosis of Metatarsophalangeal Joint of Right Great Toe.

The joint is completely obliterated, firm bony union having occurred between the opposed surfaces, and an irregular knobby growth of osteophytes surrounds the outer and under aspect of the joint. The phalanges are fixed at an angle of forty-five degrees with the metatarsal bone, being displaced outwards across the other toes.

Case of an old negro who had suffered from chronic rheumatic arthritis.

Presented by Dr. T. G. MORTON.

NERVOUS SYSTEM AND ORGANS OF SPECIAL SENSE.

SPINAL CORD.

1225.—Portion of Spinal Cord, showing Gunshot Wound.

The ball penetrated the left lobe of the thyroid gland and the œsophagus (see Spec. 1287), and then traversed the bodies of the first and second dorsal vertebræ and the intervening cartilage, and buried itself in the substance of the right half of the spinal cord. There was some hemorrhage into the sheath of the spinal dura mater, and œdema of the connective tissue outside the cord, but no meningitis. The ball is a round one, a fifth of an inch in diameter, and is not much flattened.

Case of Edward Thomas, æt. 22, admitted to the Pennsylvania Hospital, having received a pistol wound in the neck. He became immediately paralyzed from the arms down, and died in twenty-five hours.

Dr. W. PEPPER, Proc. Path. Soc., vol. ii. p. 191.

1226.—Incised Wound of the Spinal Cord.

The specimen consists of three dorsal vertebræ, with the corresponding portion of the cord. The knife, which was a two-edged dagger, traversed the muscles in the left spinal gutter, and penetrated the spinal canal between the laminae of the vertebræ, opening the joint between the articulating processes. It entered the canal obliquely from below upwards, and from left to right, dividing the left lateral half of the spinal cord.

Pennsylvania Hospital.

1228.—Great Sciatic Nerve, hanging from the Stump of a Child, the Limb having been torn off by the Revolution of a Carriage-Wheel.

Case of E. R., æt. 9, who had his right leg completely torn off by being caught between the spokes of a carriage-wheel. The femur was broken off about its middle third, and about fifteen inches of the great sciatic nerve was found hanging from the wound, having given way below its division in the popliteal space.

Dr. J. ASHURST, Jr., Proc. Path. Soc., vol. ii. p. 143.

1229.—Stump of Leg, showing Bulbous Extremities of Nerves.

The anterior and posterior tibial nerves are all involved, and terminate in bulbous, rounded extremities a third to half an inch in diameter, which are adherent to the cicatrix by dense fibrous tissue. Microscopic examination of the enlarged portion of the nerves showed them to be composed

mainly of fibrous tissue, a few nerve-fibrils only passing on through them. For a short distance also above the bulbous extremities the fibrous tissue in the nerve-trunks was much increased.

Case of a young man admitted to the Pennsylvania Hospital in 1865, whose leg had been some time previously amputated on account of an injury. The end of the stump was indurated and the cicatrix tightly adherent, and the patient suffered so severely from neuralgic pain that reamputation was performed by Dr. Morton. Recovery followed, with a good stump, which was free from pain.

BRAIN.

1231.—Brain, showing Softening of Right Anterior and Middle Lobes, following Embolism.

Case of Mary Foley, who died in the Pennsylvania Hospital with aortic disease (see Spec. 1520). She became suddenly paralyzed on the left side, and at the autopsy the right middle cerebral artery was found obstructed by a firm, adherent clot, and a large part of the anterior and middle lobes of the right hemisphere was softened to a creamy consistence.

1233.—Cancerous Tumor of Cerebellum.

There is an irregularly rounded tumor with a broadly lobed surface imbedded in the left hemisphere of the cerebellum, extending from the base almost to the upper surface. Its connections with the surrounding nervous structure are by means of fibro-cellular tissue. Microscopic examination confirmed its cancerous character.

Case of a man, æt. 61, admitted to the Pennsylvania Hospital November 4, 1862, who had suffered for some time with violent headache, which was most severe in the morning, and dizziness, which caused him to reel and stagger. Stupor supervened, and he died December 16, 1862.

1235.—Fibrous Tumor of Dura Mater.

There is an irregular, nodulated, flat fibrous growth, about two inches in diameter, springing from the under surface of the dura mater, over the left hemisphere, and causing a corresponding depression in the brain. In one place it appeared to penetrate through its cineritious substance.

Case of J. L., æt. 32, several times treated in the Pennsylvania Hospital for epilepsy. He had well-marked and frequent paroxysms, with general muscular spasms, insensibility, foaming at the mouth, and grinding of the teeth. The fits were of varying duration, and were followed by stupor of some hours' length. Memory and intellect were much impaired, he had difficulty in speaking and a tottering gait, and complained constantly of violent frontal pain. Paralysis of the right side of the body came on after his second admission, November 25, 1861, and he died January 4, 1862.

1235⁶.—Fibrous Tumor of Dura Mater.

The tumor is about an inch in diameter, of dense structure, springing from the inner surface of the dura mater by a broad base of attachment.

History unknown.

1236.—Bony Plates in the Dura Mater.

The bony growths are twelve in number, situated on either side of the longitudinal sinus, and spring from the under surface of the dura mater. Some of them are exceedingly minute, while others are half an inch in length, project about a third of an inch from the dura mater, have sharp, spiculated extremities, and present a reticulated, finely nodulated surface.

Case of a patient who had suffered from epilepsy in the Pennsylvania Hospital.

1239.—Eyeball Divided, showing Internal Structures.

Presented by Dr. T. G. MORTON.

1240.—Cancer of Eyeball.

The growth is in the shape of a flattened spheroidal mass, half an inch in diameter, attached by a short pedicle to the yellow spot of Sæmmering, and growing forwards into vitreous humor. The choroid is not pushed before it. In appearance and consistence it resembles encephaloid cancer, and microscopic examination confirmed this view.

Case of a man whose eye was glaucomatous and painful, vision being entirely lost. The ball was removed by Dr. Morton.

Presented by Dr. T. G. MORTON.

1242.—Fibrous Tumor from Lobe of Ear.

The growth is of a flattened spherical shape, nodulated, about two inches in its long diameter, and consists of dense fibrous tissue, showing, on section, very numerous short curving, intersecting bands, with small grayish patches of tissue intervening.

Case of a colored boy, æt. 20, admitted to the Pennsylvania Hospital with this tumor hanging from the lobe of the right ear, where it had been growing for about four years. Three tumors had been previously removed from the same place.

1242⁵.—Cast of Fibrous Tumor from Lobe of Ear. (See Spec. 1242.)**1243.—Adenoma of Tongue.**

Case of Mary M., æt. 16, admitted to the Pennsylvania Hospital in October, 1865. There was a tumor of hemispherical shape, about an inch and a half in diameter through the base, situated on the posterior part of the tongue, immediately in front of the epiglottis. Its surface was very red, with large, distended vessels coursing over it; it did not pulsate, but was quite elastic, with a sense of indistinct fluctuation on palpation. Subsequent microscopic examination showed it to be a soft adenoma. The tumor was strangulated by a double ligature, and the patient died on the third day, apparently from reflex paralysis of the pneumogastric nerves.

Dr. W. HUNT, *Am. Journ. Med. Sci.*, Jan. 1866, p. 163.

1243¹⁰.—Syphilitic Cicatrix upon Tongue.

The specimen shows a puckered, radiating cicatrix, just anterior to the glotto-epiglottidian fold.

Removed from a syphilitic patient who died in the Pennsylvania Hospital.

SKIN.

1245.—Tattooing, showing Crucifixion.

Presented by Dr. T. G. MORTON.

1245⁵.—Tattooing, showing Goddess of Liberty.

Presented by Dr. T. G. MORTON.

1245¹⁰.—Tattooing, showing Soldier's Tomb.

Presented by Dr. T. G. MORTON.

1246.—Lepra Syphilitica.

The specimen shows a band of white, shining epithelial scales, a third of an inch broad, and markedly raised above the surface, forming an oval ring two inches and a half long and an inch and a third wide; the skin in the centre is apparently healthy. There were numerous similar rings on the surface.

Obtained from a man who died in the Pennsylvania Hospital, with pyæmia.

1247.—Fatty Tumor removed from an Old Man.

The tumor is oval, and of large size, weighing four and a half pounds, and measuring nine inches in its long diameter. It consists of large lobes of adipose tissue, with delicate septa of connective tissue. The skin was quite movable over it, excepting at one part where it was discolored and beginning to ulcerate.

It was rather loosely attached to the anterior surface of the arm, and had been growing for many years. There was a similar tumor, of smaller size, on one of his legs.

1247⁵.—Fatty Tumor from Perineum.

The tumor had been growing for sixteen years, was single, pendulous, and almost spherical, measuring four inches in diameter. The skin covering it is quite healthy. Its structure consists of pure adipose tissue in large lobes, with thin septa of connective tissue.

Removed by elliptical incision, from J. C., æt. 45. Rapid recovery.

Operation Book, April 22, 1866.

1248.—Steatoma from Scalp.

The tumors were quite numerous, varying in size from a quarter of an inch to an inch and a half in diameter, as in the case of the specimen, and had existed for thirty years. The walls of the cyst are very thick and dense; its contents pale yellow, and of the consistence of suet.

Removed from Jacob Roser, æt. 70. Rapid recovery.

Operation Book, May 25, 1866.

1249.—Fibrous Tumor from Nape of the Neck.

The growth is oval, about an inch and a half in its long diameter. It is seated in the subcutaneous tissue, and has the skin distended over it as a capsule. A section shows a very dense, almost homogeneous, structure.

Removed by Dr. Pancoast from a man, *æt.* 40, in the Pennsylvania Hospital. A similar tumor had been removed from the same place some years before. The patient rapidly recovered after the operation.

1249⁵.—Fibrous Tumor from Parotid Region.

The mass consists of dense fibrous tissue, is much nodulated, and nearly two inches in diameter.

Removed by Dr. Morton from over the right parotid region, February 10, 1861. The patient was a single woman, *æt.* 40, and had observed the tumor growing for eighteen years, though it had only of late given her much pain.

1249¹⁰.—Fibrous Tumor from Region of Parotid.

The mass is much lobulated, of hard fibrous structure, and about an inch in diameter.

Removed by Dr. Morton from a married woman, *æt.* 28.

1249¹⁵.—Fibrous Tumor from Parotid Region.

The growth is of a flattened pyriform shape, about two inches in its long diameter, and presents a dense fibrous structure.

No history.

1250.—Epithelioma of Breast.

The growth springs from the skin over the mamma, without involving the gland. The tumor measures three inches in diameter, and is elevated about half an inch above the surface. Its base is somewhat constricted, and the surrounding skin indurated. The surface of the tumor is faintly papillary, and, on microscopic examination, presented numerous epithelial cells, but no traces of cancer.

Removed from a woman, *æt.* 49, in the Pennsylvania Hospital. She attributed the growth to a severe pinch received on the nipple from a child.

1251.—Keloid from Shoulder.

The specimen is an illustration of the keloid of Alibert, and presents an irregular, flattened tumor, about a third of an inch high, one inch long, and half an inch wide, with three cord-like prolongations. There is a similar but smaller and flatter growth some distance above. The surface of these is not discolored, but the surrounding skin has a puckered, cicatricial appearance.

Removed from the shoulder of a man in the Pennsylvania Hospital, followed by rapid recovery.

1251⁵.—Keloid (of Alibert) from Breast.

There are five distinct centres of growth of the new formation. The largest tumor presents itself as two parallel, broad, flat fibrous bands, connected by a cross-band near their middles. The larger of these bands is five inches long, three-quarters of an inch broad, and a quarter of an inch high; its fellow is about one-half this size. The surface of the growth presents also a reticulated or striped appearance, from the presence of numerous very thin fibrous bands, which run over it, curving or intersecting each other. At the extremities of the main growths these are prolonged into the surrounding tissue, giving rise to a radiated, puckered, or somewhat claw-like appearance. The smallest of the growths is a mere flat nodule, a third of an inch in diameter. The other three, however, present, in a marked degree, the appearances described above. Their size varies from one to two inches in length, and from one-third to three-quarters of an inch in width; they are quite flat. In these the superimposed band-like processes of fibrous tissue are almost limited to the ends, thus giving the impression of a cap with radiating prolongations surmounting the original growth. The color of these tumors is more white than the surrounding skin, and has a somewhat glistening appearance. The skin does not seem thickened beneath them.

No history.

1253.—Cast of Bullæ on Arm, showing a Group of large, prominent Vesicles on Dorsal Surface of Carpus.

Presented by Dr. T. G. MORTON.

1254.—Cast of Epithelial Cancer of Elbow.

The growth is situated on the anterior surface of the arm, extending about two inches and a half above and below the bend of the elbow, and is about an inch and a half in width. It is raised about half an inch from the surface, having thick, everted lips, and a papillary, tuberculated surface.

Case of a countryman, æt. 60. The tumor had been growing for several years, and of late had become very painful. Amputation through the middle of the humerus was performed, and followed by a good recovery.

Presented by Dr. T. G. MORTON.

1255.—Epithelioma of Hand.

The growth is situated on the ulnar side of the hand, and half envelops the member, extending also from the carpus on to the little finger. The edge of the growth varies, on the palm presenting a thick, rounded lip, while on the dorsum it has an irregularly scalloped outline, but is scarcely above the level of the surrounding skin. These conditions cause the hand to appear as though its ulnar side were depressed and excavated. There has, however, in reality, been only slight loss of substance. The entire surface is covered with small papillary outgrowths; there are, however,

in places, prominences which are more condylomatous. The skin in the neighborhood has a cicatricial appearance, and on the dorsum presents numerous small, shallow depressions. The little finger is much shrivelled and contracted, and apparently atrophied.

Case of Catharine Allesly, æt. 40, admitted to the Pennsylvania Hospital May 12, 1863. The disease occurs in the cicatrix of an old burn received in infancy, and had existed one year. Amputation was performed by Dr. J. Pancoast, just above the wrist, by rectangular skin flaps (Teale's method), and the patient did well and was discharged cured, August 24, 1863, having been in the house 104 days.

1256.—Epithelioma of Elbow.

The tumor is situated at the bend of the elbow, is oval in shape, and about two inches long by an inch and a half in transverse diameter. It is slightly elevated above the surrounding skin, and presents a surface studded with rather thick and low papillary projections. The subjacent tissue is apparently healthy.

Removed from the bend of the elbow of a German woman. It had been growing for a long time, and was extremely painful.

Presented by Dr. T. G. MORTON.

1257.—Cancer from Abdominal Walls.

The mass is of a flattened hemispherical shape, its base being about five inches in diameter. The lower two-thirds of the mass present, on section, the appearances of encephaloid cancer; the upper part is, however, more scirrhus in appearance.

Case of a woman, æt. 35, admitted to the Pennsylvania Hospital. The growth was seated in the abdominal wall, just below the sternum, and extended only through the integument, being attached to the cartilages of the ribs. The woman did well for some days, but died with tetanic convulsions, probably uræmic. She nursed her infant up to the day of her death. At the autopsy the kidneys were found cancerous.

1257^s.—Encephaloid Cancer of Back.

The tumor springs from the skin by a pedicle an inch and a half in diameter, and expands into an irregularly lobulated mass three inches in diameter. The surface was ulcerated, and gave rise to a very fetid discharge. The subcutaneous tissue is not involved.

Removed, with the elliptical portion of the skin, from Fanny Wright, æt. 19, colored, admitted to the Pennsylvania Hospital June 23, 1866. The wound healed quickly, but it is not known whether the disease reappeared. The tumor had existed five months.

Dr. AGNEW, Operation Book, June 23, 1866.

1259.—Laceration of Hand.

The skin of the hand has been almost completely severed around the carpus, and stripped off from the hand and the entire thumb like a glove. The skin of the fingers is only loosened around the first phalanges. The

subjacent tissues, especially on the dorsum, are pulpified and ecchymosed. The injury occurred in a cracker bakery. Amputation was performed just above the wrist. No other history.

1261.—Hypertrophy of Nail of Great Toe.

The nail is about one inch long, very much thickened, and curves downwards and inwards like a claw.

Presented by Dr. T. G. MORTON.

1263.—Hair of a Female from the Temple of the Sun in Peru.

The specimen presents a thin, curling lock of hair, quite fine and of dark brown color, about seven inches long.

DIGESTIVE SYSTEM.

1270.—Salivary Calculus.

The specimen shows numerous small fragments, together making a mass about the size of a pea.

Removed from the mouth of a soldier, by Dr. A. J. Comfort.

Presented by Dr. T. G. MORTON.

1271.—Cast of a Salivary Calculus from a Horse.

The specimen is of oval shape, five inches long, and two inches at its thickest part.

Presented by Dr. T. G. MORTON.

1285.—Cancer of Œsophagus.

There is an oval, somewhat lobulated tumor extending from the thyroid cartilage three inches and a half downward. This incloses the Œsophagus, and is much larger on the left side. On making a section through this into the Œsophagus, the growth is seen to involve its walls, which posteriorly are fully an inch in thickness. The section presents a dense scirrhus appearance, and the deposit in the wall forms a tumor which almost obliterates the tube, there being only a space about a quarter of an inch in diameter for food to pass. The inner surface of the growth is irregularly nodulated. One inch below the cricoid cartilage an ulcerated opening exists into the trachea. The adjacent cervical glands are enlarged and cancerous. On removing the sternum, several cancerous tumors were found attached to the posterior surface of the manubrium. (See Spec. 1015.)

Case of a woman, æt. 45, admitted to the Pennsylvania Hospital October 8, 1861, who for four months previously had had slight dysphagia. On admission, swallowing was very difficult. There was a swelling on the front of the neck, immediately below the thyroid cartilage, extending downward two inches and a half. This was hard to the touch, and could be felt to rise during the efforts to swallow. Deglutition became more and more difficult, respiration became croupy and painful, and she died on the fourth day after admission.

1286.—Cancer of Œsophagus.

The growth extends about four inches downward from the cricoid cartilage. The entire Œsophagus is involved, except a small strip of the anterior wall. There is a scirrhus thickening of the wall, and externally the tumor presents irregular scirrhus nodules. Immediately below the cricoid cartilage the calibre of the Œsophagus appears to have been almost entirely obstructed, nothing but a small sinuous track remaining. This obstruction is due to a rounded scirrhus mass, an inch and a half in diameter, on the

left side of the œsophagus. Part of this scirrhus tumor has led to destruction of the cartilages of the trachea, and projects into this latter tube as a low papillary growth. Further down the œsophagus the constriction has not been so great; the mucous membrane is entirely destroyed, and there are numerous irregular encephaloid nodules projecting into the cavity. The trachea is compressed and tortuous.

Case of a woman, æt. 55, admitted to the Pennsylvania Hospital July 3, 1861. She had been troubled for several months with dyspeptic symptoms, but had difficulty of deglutition for only a comparatively short time before death. When first examined, a firm mass was felt lying across and apparently embracing the trachea half an inch below the thyroid gland. This was deep-seated and immovable. By introducing a stomach-tube, an obstruction could be distinguished opposite the external swelling. There was a small, round, movable tumor in the right mamma. She died of suffocation, August 22, 1861.

1287.—**Gunshot Wound of the Œsophagus and Thyroid Gland.**

The ball has penetrated the left lobe of the gland, and both walls of the œsophagus; it then traversed the bodies of the first and second dorsal vertebrae, and buried itself in the spinal cord. (See Spec. 1225.)

Case of Edward Thomas, æt. 22, admitted to the Pennsylvania Hospital October 30, 1865. He had received a pistol-shot fifteen hours previously, the ball entering the neck an inch and a half above the clavicle, and one inch to the left of the median line, in a direction from above downwards, and from left to right. There was profuse hemorrhage, and whatever food or drink was taken was discharged through the wound. He became paralyzed from the arms down, and died twenty-five hours after the injury.

Dr. W. PEPPER, Proc. Path. Soc., vol. ii. p. 191.

1292.—**Perforating Ulcer of Stomach Cured by Adhesion.**

There are two ulcers seen on the posterior wall, just below the lesser curvature. One of these is almost closed by a valve-like membrane, the slit-like opening which remains having been entirely closed by an enlarged gland which was adherent to the outer wall of the stomach at this point. The other ulcer presents itself as a deep, narrow depression, the walls of the stomach being contracted and puckered around it. The external surface of the stomach at the corresponding point is covered with a thick layer of organized lymph.

Case of a man, æt. 23, who died from the effects of myeloid tumors in various parts of the body, one being found in the right iliac region, a second involving the head of the pancreas and adherent to the omentum, and a third adherent to the lobus Spigelii. No peritonitis had resulted from the perforation.

1292⁵.—**Perforating Ulcer of Stomach.**

The ulcer is situated on the lesser curvature of the stomach, about an inch and a half from the cardia, and has perforated all the coats of its wall, causing an opening nearly half an inch in diameter.

No history.

Presented by Dr. A. D. HALL.

1293.—Hemorrhagic Erosion of Gastric Mucous Membrane.

The mucous membrane of the stomach was thin, with six or seven superficial ulcers from one-sixth to half an inch in diameter, with dark reddish-black bases. This dark matter contained hæmatin in abundance, as crystals and granules, a few altered blood-corpuscles, cells, and fragments of glands, deeply stained, and some free oil.

Case of Evan Clownley, æt. 53, admitted to the Pennsylvania Hospital March 29, 1866, with a sloughing wound of the right thigh. Extensive burrowing followed, the discharge was profuse and fetid, rapid emaciation ensued, with hebetude, colliquative sweats, and hiccough, and he died April 11, four weeks after the injury. There were no metastatic abscesses; the blood was fluid, bistre-colored, and many of the red corpuscles crenated.

Dr. W. PEPPER, *Proc. Path. Soc.*, vol. ii. p. 225.

1295.—Polypoid Hypertrophy of Villi of Stomach.

Near the pyloric orifice there is a patch about four inches in diameter, closely set with rounded projections from the mucous membrane. Some of these present themselves as hemispherical elevations of the mucous membrane, while others are elevated on distinct constricted pedicles. They vary in size from one-sixth to one-third of an inch. They appear to be projections of the mucous tissue of the stomach. No ulcerations were seen on the surface of these bodies, or on the surrounding mucous membrane. When cut into, they were found to contain much black pigment.

Case of George D., æt. 27, who had suffered with jaundice and debility. Violent emesis began July 18, 1860, and persisted; the matters vomited containing much black pigment, which under the microscope appeared to be contained in nucleated cells. Diarrhœa set in in August, and soon led to his death.

Presented by Dr. C. C. LEE.

1300.—Cancer of Cardia.

The growth is situated near the cardiac orifice, on the anterior wall of the stomach. It occupies a space about three inches in diameter, and presents a surface sunk below the level of the surrounding mucous membrane, and covered with delicate, shaggy, filamentous projections. These assume in places a felted or reticulated appearance. The mucous membrane in the neighborhood presents an abraded, slightly filamentous appearance.

Case of a gentleman, æt. 68, who had suffered from gastric distress for eight months. He had had no tenderness, and vomiting was not present until two weeks before death, after which it remained constant, being caused by every article taken into the stomach.

Presented by Dr. A. H. SMITH.

1300⁵.—Cancer of Cardiac End of Stomach.

The œsophagus is apparently healthy, but the cardiac orifice is surrounded by a cancerous growth fully three inches and a half in width. The surface of this mass is very irregular, presenting numerous elevations

and depressions; the edges are thick and prominent, and the walls of the stomach over the diseased area are dense, very thick, and closely adherent to adjacent viscera. The rest of the organ is quite healthy.

History unknown.

1301.—**Scirrhus of the Pylorus.**

The growth involves the entire circumference of the pyloric orifice, extending for several inches along the walls of the stomach. It is, however, much more marked near the pylorus, where the walls are fully three-quarters of an inch thick. The pyloric opening is so constricted that it will scarcely allow fluid to pass. On making a longitudinal section, the deposit is seen to occupy chiefly the submucous and muscular layers, which present a row of closely apposed flesh-colored bands, running vertically to the mucous membrane. The mucous membrane does not seem altered, and is but little blended with the subjacent growth. The serous layer is thickened and roughened externally, from adhesions which have formed with adjacent parts. The growth does not pass into the duodenum at all, the mucous membrane of which appears quite healthy.

Case of a man in the Pennsylvania Hospital, who had enjoyed good health, with the exception of occasional attacks of dyspepsia, until admission. Vomiting came on quite suddenly, and continued so persistently that for three months before his death he was fed by enema.

1305.—**Incised Wound of Stomach.**

The incision is about an inch and a half long, and has clean, sharp-cut edges. There is no appearance of protrusion of the mucous membrane. There is a patch in the neighborhood where the mucous membrane is reddened and thickened.

No history.

1306.—**Gunshot Wound of Stomach.**

The ball has traversed both walls. The wound in front is close to the greater curvature, about midway between cardia and pylorus. It is oval, about three-quarters of an inch long, and presents some eversion and protrusion of the mucous membrane. The wound of the posterior wall is a ragged oval opening, two inches and a half by an inch and a half in size, its long axis corresponding to that of the stomach; its lower border begins at the greater curvature; to the right it extends to the pylorus. The direction of the ball seems to have been from before backwards, and from left to right.

No history.

Presented by Dr. A. D. HALL.

1310.—**Abnormal Pouch of Ileum.**

The pouch springs from the ileum about four inches above the colon, opposite the mesentery. It is about five inches in length, almost as large

as the ileum at its origin, but tapers toward its extremity, being somewhat thumb-shaped. It appears to be composed of all the coats of the intestines.

No history.

1810⁵.—Diverticulum from Ileum.

It is about two inches long, and a third of an inch in diameter at its origin, but rather larger at its free end. Its walls resemble those of the intestine.

The specimen was obtained from the body of a young sailor who died in the Pennsylvania Hospital with cardiac disease. No other anomaly was present.

1811.—Abnormal Pouch of Small Intestine.

The pouch is about three inches long, of the ordinary calibre of the ileum, and composed of all the coats of the intestine.

No history.

1815.—Stricture of Ileum.

It barely admits a goose-quill (one-sixth of an inch in diameter).

Case of a man who died in the Pennsylvania Hospital with symptoms of intestinal obstruction. The portion of the ileum above the stricture was enormously dilated.

Presented by Dr. T. G. MORRISON.

1815⁵.—Constriction of Ileum.

The constriction, which is seated four inches above the valve, was caused by a band of organized lymph extending from the end of the appendix vermiformis to a loop of the ileum. This band was a third of an inch thick and half an inch long, and adhered tightly to the constricted part of the bowel. The mucous membrane has been completely destroyed at the point of pressure. The rest of the intestine was healthy.

Case of John Hagy, æt. 55, admitted to the Pennsylvania Hospital March 6, 1866, with a hernial tumor in the left groin, and symptoms of obstruction of the bowels. As the tumor was irreducible, Dr. Agnew cut down upon the sac, which was much thickened and indurated, but contained *no* bowel; a ligature was passed around the constricted portion, and the remainder removed. (See Spec. 1439.) Symptoms of obstruction continued, and the man died on the third day.

Dr. T. H. ANDREWS, Proc. Path. Soc., vol. ii., March 14, 1866.

1820.—Small Intestine, from a Case of Cholera.

The peritoneal coat was much injected. The mucous membrane is thinned, softened, and shreddy in the duodenum and jejunum; in parts of the ileum it was entirely destroyed. The solitary glands were much enlarged, especially in the duodenum and lower part of the ileum. Peyer's patches were also prominent. The intestines contained a very large quantity of fluid resembling rice-water. The stomach was somewhat congested, but its follicles were not much enlarged; it contained a light brown fluid.

Case of Peter Lund, a German, æt. 27, who was admitted to the Pennsylvania

Hospital July 15, 1866, in a state of profound collapse, and died a few minutes after admission. He had been attacked with cramps, vomiting, and purging five hours previously.

1320⁵.—Lower Part of Ileum and Cæcum, from same Case.

The mucous membrane of the ileum is much destroyed; Peyer's patches have a rough, reticulated appearance. The mucous membrane of the cæcum is comparatively healthy, but presents very many small, oval, ulcer-like depressions, due to disease of the follicles.

1330.—Ileum, showing Typhoid Fever Ulcers.

The specimen shows enlargement of the solitary glands. One of Peyer's patches is also seen, prominent, and presenting on its surface several small oval depressions, as though from superficial ulceration of some of the glandules.

Pennsylvania Hospital.

Presented by Dr. T. G. MORTON.

1331.—Ileum, showing Typhoid Fever Ulcers.

The solitary glands are slightly enlarged. The mucous membrane appears thin, and Peyer's patches are not prominent, but present ulcerated surfaces. In some places these ulcers are very small and superficial, but in others they are much larger (three-quarters by half an inch), with sloping edges, the base in the centre being formed by the transverse muscular layer.

Pennsylvania Hospital.

Presented by Dr. T. G. MORTON.

1332.—Ileum in Typhoid Fever.

The solitary glands are very much enlarged, forming hemispherical projections above the mucous membrane; in several of them a minute superficial ulcer can be seen on the most prominent part. Peyer's patches are extremely thickened and prominent, with rounded, slightly everted edges; their surface is mostly uniform and smooth, but in places slight superficial ulceration has occurred.

Pennsylvania Hospital.

Presented by Dr. T. G. MORTON.

1333.—Ileum in Typhoid Fever.

There are but a few enlarged solitary glands visible. Peyer's patches are, however, much enlarged and very prominent; the central part of their surface presents a slightly reticulated appearance, from incipient superficial ulceration.

Pennsylvania Hospital.

Presented by Dr. T. G. MORTON.

1334.—Ileum in Typhoid Fever.

Numerous solitary glands are seen scattered over the mucous membrane, about the size of millet-seeds. Two of Peyer's patches are shown, much thickened and very prominent, with a porous or finely reticulated surface.

Pennsylvania Hospital.

Presented by Dr. T. G. MORTON.

1335.—Ileum in Typhoid Fever.

The solitary glands are much enlarged, and have not yet ulcerated. Two of Peyer's patches are shown, which are prominent, with thick, everted edges; their surface presents a reticulated appearance, owing to very numerous minute superficial ulcers. Many of the septa between these little ulcers are assuming a shaggy, loose appearance, as though beginning to be broken down.

Pennsylvania Hospital.

Presented by Dr. T. G. MORTON.

1336.—Ileum in Typhoid Fever.

The solitary glands are enlarged, and several of them present slight superficial ulceration. A single Peyer's patch is shown, with somewhat shelving borders, the central portion being the most prominent. This central portion presents a rather coarsely reticulated appearance, from ulceration of the glandules; and in places this ulceration is on the point of destroying the intervening septa.

Pennsylvania Hospital.

Presented by Dr. T. G. MORTON.

1337.—Ileum in Typhoid Fever.

A few moderately enlarged solitary glands are seen, some of which present slight superficial ulceration. A single large oval Peyerian patch is shown, with slightly prominent edges; its surface is quite coarsely reticulated, the septa being in places reduced to mere filaments of connective tissue.

Pennsylvania Hospital.

1338.—Ileum in Typhoid Fever.

The solitary glands are slightly enlarged. Three Peyerian patches are shown, with moderately prominent edges. Their entire surface is studded with minute ulcers, due to the destruction of the glandules; in places a number of these have been thrown into one, forming rounded shallow ulcers, with slightly shaggy bases, formed of the submucous connective tissue.

Case of George Wright. (See below.)

1338^s.—Ileum in Typhoid Fever.

The solitary glands are considerably enlarged, forming little acuminate projections. Three Peyerian patches are shown, presenting various stages of ulceration. In places the enlarged glandules can be readily seen, as small yellowish bodies, imbedded in the mucous membrane, the epithelial layer of which is softened and hanging in shreds; in other parts the glandules and intervening tissue have been entirely destroyed, causing rather small deep ulcers, with irregular steep walls, and having the muscular coat for their floor.

This specimen was removed from the ileum, nearer the valve than the preceding specimen, from the same case. (See below.)

1338¹⁰.—Ileum and Cæcum in Typhoid Fever.

The solitary glands are enlarged, as in the previous specimen. Immediately above the valve, the ileum is almost encircled by the enlarged, prominent Peyerian patches. The condition of these patches is, however, not further advanced than in the previous portion, and in no place has the ulceration gone deeper than the submucous tissue; indeed, the ulcers formed by the destruction of the glandules are smaller and fewer than in the upper patches.

The edges of the valve are much thickened, and present numerous superficial ulcerations.

The mucous membrane of the large intestine is almost healthy, the follicles being, however, somewhat enlarged, and a few of them showing shallow ulcers.

Case of George Wright, æt. 17, admitted to the Pennsylvania Hospital with all the symptoms of typhoid fever. Death occurred about the twelfth day. The mesenteric glands were much enlarged, softened, and injected. (See Spec. 1579.)

1340.—Perforation of Ileum.

There is a firm adhesion between the fold of the ileum and the colon just above the rectum, not large enough, however, to prevent the escape of the contents of the ileum. There are two perforations of small size through the ileum. The cæcum was obstructed by disease, and in the descending colon there was a firm and quite tight constriction.

Case of a young girl, æt. 15, who in the early part of 1860 had an attack of inflammation of the bowels, from which she seemed to recover. In September of the same year she was seized with symptoms of general peritonitis, with constant vomiting, which became fecal on the seventh day, and death occurred soon after. At the autopsy, diffused peritonitis was found, resulting from the above perforations.

Presented by Dr. T. G. MORTON.

1342.—Perforation of the Ileum in Typhoid Fever.

The perforation occurred about twelve inches above the ileo-cæcal valve; it is round, about one-fifth of an inch in diameter, and seated at the upper extremity of one of Peyer's patches. On the internal surface the edges of the opening are shelving. The rest of the patch has sloughed out down to the muscular coat, and there are several ulcers in the neighborhood.

Case of a woman, æt. 31, who died in the Pennsylvania Hospital.

Presented by Dr. A. D. HALL.

1345.—Minute Follicular Ulcers of Ileum.

The specimen shows a piece of the ileum about eight inches long, the entire surface of which presents a reticulated appearance, with numerous elevated curved ridges. The entire mucous membrane appears to have changed its character, and has a fibroid appearance. The reticulated appearance is due to a very large number of small, oval, depressed ulcers,

some of which are separated merely by delicate filaments of mucous membrane.

From a patient who died of tuberculous peritonitis.

Presented by Dr. A. D. HALL.

1349.—Tubercular Ulceration of the Ileum.

The specimen shows entire destruction of several of Peyer's patches by ulceration. The edges of these ulcers are irregular and shreddy. Their bases present a number of low intersecting ridges, which inclose small depressions. A number of ulcers are also seen occupying the seat of the solitary glands, smaller and quite round, with edges like those above described, but with more smooth bases.

Case of a woman who died in the Pennsylvania Hospital.

Presented by Dr. A. D. HALL.

1350.—Small Intestine, showing Epithelioma.

The specimen shows a small, firm, whitish nodule, about half an inch in diameter, attached to its outer surface, and presenting the microscopic appearances of epithelioma. There were several other nodules of similar characters.

Case of a woman, from whom Spec. 1693, of piliferous ovarian cyst, communicating with the intestine, was obtained.

1351.—Jejunum, showing Rupture.

The specimen shows a rupture two-thirds of an inch long, near its upper part; the edges of the rupture are quite regular, and drawn apart by the contraction of the muscular coat. The peritoneal cavity contained both feces and urine, the urinary bladder having also been ruptured near its fundus. (See Spec. 1646.)

Case of Mary Stephenson, æt. 38, who was admitted to the Pennsylvania Hospital August 20, 1866, and died in eighteen hours, with acute peritonitis. She had fallen from a second-story window.

1352.—Stricture of Colon.

The bowel, both above and below the seat of greatest constriction, is quite contracted. It has been laid open for several inches, showing several small ulcers; the mucous membrane is thrown into close, prominent folds, but the walls are not materially thickened. At the seat of stricture, the calibre of the bowel will scarcely admit the tip of the little finger.

No history.

1353.—Dilatation of Colon, from Scirrhus of Rectum.

The specimen is at least nine inches in diameter. The longitudinal muscular bands are much widened and thickened, and the walls are also much more dense and thick than normal. The pouches of the colon are entirely

obliterated, the mucous membrane slightly mammellated, and the hypertrophied bands of transverse muscular tissue can be recognized through it.

Case of a man, æt. 41, admitted to the Pennsylvania Hospital with cancer of the rectum, about eight inches above the anus. The abdomen was enormously distended and painful; the bowels were only opened by enemata. Dilatation was attempted, but with no effect, save to allow some gas to pass; the stricture became tighter and tighter, till, at the time of his death, it would not allow a penholder to pass. At the autopsy, the abdomen measured over five feet in circumference, and the colon was at one point eighteen inches in circumference. At least two gallons of liquid feces were found in the bowels. All the other viscera were healthy.

1355.—**Dysenteric Ulcers of Colon.**

The specimen shows the mucous membrane in great part destroyed by numerous shallow ulcers. Where these ulcers are isolated, they are seen to be oval or round, quite small, with rather sharp-cut edges, and penetrating only through the mucous membrane. In most parts, however, they coalesce, forming winding bands of ulceration, which surround islets of prominent, thickened mucous membrane. In places the mucous membrane is entirely destroyed over quite large spaces, the surface presenting a gnawed appearance.

Case of a patient who died of dysentery in the Pennsylvania Hospital.

Presented by Dr. A. D. HALL.

1356.—**Dysenteric Ulcers of Cæcum and Colon.**

The specimen shows the cæcum and first part of the ascending colon. There are numerous very large ulcers, which are in places partly covered with a dirty grayish false membrane, but mostly present a flocculent, shaggy surface. In most instances they have merely destroyed the mucous membrane, but in some places they have involved all the coats but the peritoneum; and this was so softened that, in handling the specimen, a small perforation has occurred. These ulcers are transverse, some of them almost encircling the entire bowel. They are seated both on and between the folds of the mucous membrane, which are swollen and much more prominent than normal.

Case of a soldier who died in the Pennsylvania Hospital, in the summer of 1865, of malignant dysentery contracted on the Potomac River.

1357.—**Ascending Colon, showing numerous minute Dysenteric Ulcers.**

The ulcers are small, oval, and quite shallow, only extending through the mucous membrane. In some of them the opening in the mucous membrane is smaller than the subjacent ulcer, so that the ulcer is partially overhung by a delicate fringe of mucous membrane. The ulcers appear to have originated in the follicles. The mesocolic glands are moderately enlarged.

No history.

1358.—Colon, showing Sloughing of its Mucous Membrane, from Malignant Dysentery.

In places the mucous membrane presents minute openings, evidently connected with ulceration of the follicles. In others the disease has gone further, and there are small oval ulcers. Throughout most of the specimen, however, the mucous membrane has been entirely destroyed, and large ulcers, an inch or more in width, and almost encircling the colon, are seen, some of which present flocculent submucous tissue for their base, while in others this too has been destroyed and the muscular coat is bared. There are also broad fringes hanging from the edges of some of the ulcers. The islets of mucous membrane which intervene between these ulcers appear quite healthy.

Case of a soldier admitted to the Pennsylvania Hospital with malignant dysentery.

1359.—Colon, showing Sloughing Dysenteric Ulcers, with Perforation.

The mucous membrane of the large intestine was much thickened, infiltrated, and discolored. There were two forms of ulceration present: very numerous, closely-set, small ulcers, shallow and oval, and separated by narrow bands of mucous membrane; and large transverse ulcers, measuring from one to three inches in their long diameter. These ulcers presented thickened edges, and in some cases had their base formed by the shaggy submucous tissue; in others, however, the entire thickness of the intestinal wall was converted into a brownish, friable slough, which in several places had separated, causing perforation of the intestine. In one place the peritoneum is bared to the extent of an inch and a half by half an inch, and the perforation is at least three-quarters of an inch in length.

Case of Patrick —, *et. 27*, a soldier who had been encamped for some months on the Potomac River. The attack began five days before admission (July, 1865), with a chill, fever, cutting pains in the abdomen, and very frequent bloody discharges. The patient appeared relieved for a few days, but obstinate hiccup set in, the stools acquired a fetid, sickening odor, and presented brownish flocculi floating in a dark liquid. Tympany, with frequent vomiting, ensued, and lasted till death.

At the autopsy, there was marked hypostatic congestion of the lungs. The abdominal viscera were also much congested; the spleen half as large again as normal, and of fair consistence. The peritoneal cavity contained a small quantity of grumous fluid, and there were streaks of dark, imperfectly organized lymph on the small intestines. This part of the bowel contained a large amount of ochre-colored fecal matter, and its mucous membrane was stained with bile. There was, however, no glandular lesion, save slight enlargement of one or two of Peyer's patches.

1360.—Colon, showing Dysenteric Ulcers, with Perforation.

The specimen shows numerous small follicular ulcers, and here and there large oval transverse ulcers, most of which do not extend entirely through the submucous tissue; but at one place all the coats of the bowel have

become involved, and perforation has ensued. The opening in the peritoneum is about one-half by one-fourth of an inch in size, and the sides of the ulcer are sloping.

Case of a man who died in the Pennsylvania Hospital from malignant dysentery.

1362.—Colon, showing Perforating Ulcer.

The specimen shows a few small, oval, follicular ulcers, and a single large, transverse, oval ulcer, an inch and a half by three-quarters of an inch in size. This ulcer involves the entire thickness of the bowel, its edges being vertical, almost as though cut out by a punch. At one end of it the sloughing wall retains its connection with the surrounding tissue, but there is a perforation of at least an inch in length by half an inch in breadth. The edge of the mucous membrane surrounding the ulcer is everted, thickened, and shaggy.

Case of a patient who died in the Pennsylvania Hospital. No history.

1365.—Appendix Vermiformis, nine inches in length.

It is of about the natural calibre, and was filled with fecal matter.

Presented by Dr. T. G. MORTON.

1367.—Appendix Cæci, showing Ulceration.

Case of W. W., a healthy man, æt. 25, who had presented symptoms of obscure intestinal trouble for a few days, followed by rapidly fatal general peritonitis. At the autopsy, diffused peritonitis was found, especially marked in the right iliac region. The omentum was adherent to the vermiform appendix, forming a cap for it. The cavity of the appendix was distended with purulent matter, and contained a small intestinal concretion much resembling a cherry-stone. The appendix shows two quite large oval ulcers, the deeper extending down to the peritoneum, which is very thin and coated externally with a layer of soft lymph, and it is quite possible that a minute perforation had occurred. The rest of the intestinal canal was entirely healthy.

Dr. W. PEPPER, Proc. Path. Soc., vol. iii., April 26, 1867.

1368.—Appendix Cæci, showing results of Perforation.

The appendix is changed into a firm, dense fibrous cord, its cavity being obliterated. About a third of an inch from its free end there is an opening, with firm, rounded edges, leading to the middle of this cord.

On the exterior, attached quite firmly around this opening, there was a reddish-yellow jelly-like mass, about three-quarters of an inch in diameter, which consisted of shrivelled blood-corpuscles, a few nucleated cells, and a little fibrous tissue, and undoubtedly was an altered blood-clot. This mass has contracted greatly, from immersion in spirit.

Case of an old man who died with enlarged prostate, and vesical hemorrhage from forced catheterism. (See Spec. 1663.) No history of the occurrence of the perforation of the appendix was obtained.

Dr. W. PEPPER, Proc. Path. Soc., Jan. 23, 1867.

1371.—Rectum, showing Cancerous Constriction.

The specimen shows a mass of apparently encephaloid cancer occupying one-half the circumference of the intestine, and projecting into it about three inches and a half above the internal sphincter. There was considerable distension of the intestine above it.

No history.

1372.—Rectum, showing Cancerous Disease.

There is a mass of encephaloid cancer, about two inches in diameter, projecting into the bowel at the lower part of the colon, and almost occluding it. The free surface of this tumor is nodulated, and in places shaggy. The walls of the bowel in the neighborhood are thickened and dense, the adjacent lymphatic glands involved, and there were strong false adhesions between the rectum and adjoining parts. The bowel is much distended above the tumor, while below it is contracted and wrinkled.

Case of a lady, æt. 58, who had suffered some time with constipation, and a tumor, which was not painful to the touch, in the left iliac region.

Presented by Dr. T. G. MORTON.

1373.—Rectum, showing Villous Cancer, Ulceration into the Bladder, and Perineal Fistulæ.

About four inches from the anus there is complete obstruction of the rectum, from cancerous infiltration of its walls, and the projection into its cavity of an irregular, flat encephaloid growth, surmounted by numerous close-set, fringe-like villous processes. In places this villous growth separates from the mucous membrane in the form of a thin, reticulated layer. There were also several small submucous cancerous deposits higher up in the intestine. The pelvic viscera were matted together, and two false passages existed between the urinary bladder and the bowel, one opening into the rectum, the other into the ileum, about two feet above the valve. In addition to this, the wall of the rectum was perforated, allowing fecal matter to escape between the rectum and bladder, thus forming a cavity which discharged by two small fistulous openings in the perineum.

Case of a soldier, æt. 42, admitted to the Pennsylvania Hospital with chronic dysentery. The stools were frequent, thin, and offensive, rarely if ever containing blood; there was great tenderness over the hypogastric region, and finally a discharge of flatus and feces through the penis, and of urine from the anus. A double perineal fistula formed, and death ensued from exhaustion.

1378.—Intestinal Calculus, from a Case of Typhlitis.

The calculus is about a third of an inch in diameter, formed of concentric layers, some of which are brownish, others of a light gray color. It is quite friable, and has no foreign body as a nucleus, though there were a few fig-seeds on its exterior surface. Analysis showed it to be composed of phos-

phate and a trace of carbonate of lime, and organic matter; no cholesterine was present.

Case of a young girl, *æt.* 8, who died from intestinal obstruction and peritonitis. Her symptoms were pains in the abdomen, referred especially to the right iliac region; vomiting, which became fecal on the tenth day; tympany and signs of general peritonitis, soon followed by death. This calculus was found in the appendix *cæci*, the extremity of which had ulcerated away, and the discharge emptied into the abdominal cavity. There was general acute peritonitis, and in the right iliac region the adhesions were so thick and tense as to compress the bowel strongly.

Presented by Dr. T. G. MORTON.

1380.—Excrement of Boa Constrictor, consisting of Masses of pure Uric Acid.

1381.—Excrement of Boa Constrictor, consisting of Masses of pure Uric Acid.

1385.—Liver, showing Multiple Pyæmic Abscesses.

The convexity of the liver was dotted here and there with bright yellowish patches, and, upon making a section, the organ was found studded with pyæmic abscesses, varying in size from that of a split pea to half an inch in diameter. The portal vein and some of its branches contained old, partially softened clots. The blood was much altered, and there were also abscesses in the lungs and spleen.

Case of Elizabeth Rankin, *æt.* 55, admitted to the Pennsylvania Hospital January 31, 1866, with compound fracture of the left arm, involving the elbow-joint. The ends of the bones were resected, but the patient died, after well-marked symptoms of pyæmia, on the twenty-fourth day.

1387.—Cirrhosis of Liver.

The specimen shows the organ contracted, and its surface studded with very many nodular projections, varying in size from a pin's head to a third of an inch in diameter; the tissue is very dense and leathery, and the peritoneal capsule somewhat thickened. The kidneys also were granular and contracted.

Case of — Dolan, *æt.* 25, who died after an illness of several months, dropsical and comatose. He had been very intemperate for several years, and much exposed to wet and cold.

1390.—Fibroid Tumors of Liver.

The specimen shows several tumors, about an inch to an inch and a half in diameter, imbedded in the substance of the liver and projecting from its surface. Upon section, these are seen to have a fibrous capsule, and are themselves fibroid in structure. At one or two points there are small masses resembling inspissated bile.

Presented by Dr. A. D. HALL.

1392.—Liver, showing Cancer.

The entire organ, in both right and left lobes, is studded with nodules of encephaloid cancer. The intervening liver-structure appears pale and fatty. The entire liver is moderately though not very much enlarged.

Case of J. H., æt. 50, of previous good health, but of intemperate habits, admitted to the Pennsylvania Hospital April 30, 1864. He had complained for three months before admission of frequent vomiting and epigastric pain, with a sensation of fulness and constriction along the œsophagus, but had never vomited blood. The bowels were variable, at times loose, at others costive. The emaciation was extreme. The abdomen was scaphoid. There was no perceptible enlargement of the liver or spleen at the time of admission. He remained in this state, the vomiting at times relieved, but again recurring; the bowels were usually constipated. The emaciation progressed, so that on the 10th of July, 1864, a nodular tumor was felt in the epigastrium, evidently continuous with the left lobe of the liver. The surface was very anæmic and pale, but not at all icterode. Edema of the extremities supervened, and he soon died. In addition to the cancer of the liver, there was scirrhus cancer of the pylorus, causing marked constriction. The other organs were healthy.

1393.—Liver, showing Carcinoma.

The entire organ is seen studded with scirrhus tumors, some of which are at least two inches and a half in diameter, and project from its surface.

Case of a woman, æt. 50, who had presented symptoms of cancer of the liver for two years. She was much emaciated and jaundiced. The tumors could be distinctly felt on palpation.

Presented by Dr. T. G. MORTON.

1399.—Liver, showing Rupture.

The rupture has occurred on the convexity of the right lobe, and involved at least half the thickness of the organ.

Case of Nathan Smith, æt. 30, admitted to the Pennsylvania Hospital April 25, 1863. He had been run over by a cart, the wheel passing diagonally upwards over his body. Crepitus was distinct over the third and fourth right ribs, and there was bloody expectoration. He sank, and died with symptoms of internal hemorrhage. At the autopsy, the second, third, and fourth ribs of the right side were fractured just inside their angle, the lung was collapsed, and the pleural cavity partly filled with blood. The peritoneal cavity was also filled with fluid blood.

1400.—Liver, showing Rupture.

The laceration was on the convexity of the right lobe, about four inches in length, and extending deeply into the substance of the organs.

Case of a German, æt. 30, who was run over by a heavily-laden wagon, the wheel passing across the epigastrium. He died forty-eight hours afterwards, from internal hemorrhage. At the autopsy, three quarts of blood were found in the peritoneal cavity, and the peritoneum was roughened by patches of recent lymph.

1401.—Liver, showing Gunshot Wound.

The track of the ball, which is nearly half an inch in diameter, passes directly through the anterior portion of the left lobe. The wound of exit is larger than that of entrance, and has an irregular, jagged margin.

No history.

1403.—Hepatic Duct, showing considerable Dilatation.

Case of a patient in the Pennsylvania Hospital.

1406.—Cystic Duct, showing Impacted Calculi.

There are two small calculi tightly impacted just at the beginning of the cystic duct. The gall-bladder is quite large, its walls thickened and fibrous. It contains at least a hundred biliary calculi, some of them large, with beautifully polished facets.

Case of a patient in the Pennsylvania Hospital.

1408.—Gall-Bladder, showing very numerous Ulcers.

The ulcers extend through the mucous membrane, and vary in size from a mere point to half an inch in length; they are oval or rounded in shape, with sharply-cut edges, and have a good deal of pigment deposited in their bases. The walls are not materially altered. The gall-bladder contained many small, irregular, black calculi.

History unknown.

Presented by Dr. W. PEPPER.

1409.—Gall-Bladder, showing Fistula.

The walls of the bladder are very much thickened, and its inner surface rough and corrugated. The external surface was firmly attached by organized false adhesions to the walls of the abdomen, and a fistulous track is seen passing externally from near the end of the gall-bladder. When first removed, it was filled with gall-stones, which obstructed the cystic duct.

Case of a female, æt. 65, who died of diarrhoea. She had been subject for many months to attacks of jaundice, accompanied with great pain in the region of the liver, and finally a tumor formed in the right hypochondrium and opened on a level with the twelfth rib, about four inches from the median line, and continued to discharge till her death. At the autopsy, the liver was found much enlarged, and of a bright yellow color.

Presented by Dr. T. G. MORRIS.

1410.—Gall-Bladder, containing Calculi.

The walls are decidedly thickened, and contracted closely around three large calculi which entirely fill the cavity of the gall-bladder.

Case of a patient in the Pennsylvania Hospital.

1412.—Gall-Bladder, showing Impacted Calculus.

The gall-bladder is of rather large size, and presents a large oval calculus, at least an inch long, which has become impacted just at the orifice of the cystic duct. There is a marked constriction of the gall-bladder immediately above the calculus, and the cystic duct is exceedingly contracted.

No history.

1413.—Gall-Bladder, contracted around a Calculus.

The walls of the gall-bladder are much thickened, and tightly contracted around an oval calculus about one inch in length, the cavity being thus entirely obliterated. The cystic duct remains patulous, though small; and the hepatic and common biliary ducts are quite healthy.

The specimen was removed from the body of an old man who died with simple hypertrophy of the heart and exophthalmic bronchocele, and who was not known to have ever suffered with biliary trouble.

Presented by Dr. W. PEPPER.

1420.—Biliary Calculi.

The calculi are of various sizes and irregular shapes, all presenting several facets. They are pure white in color, with the exception of a few streaks of brown, marking the lines where they had not come in contact with each other. They are about thirty in number.

From a case in the Pennsylvania Hospital.

1421.—Biliary Calculus.

The calculus is round, smooth externally, and about two-thirds of an inch in diameter. It has been divided, showing a nucleus of cholesterine with concentric layers around it.

Presented by Dr. W. LIVEZEY.

1425.—Pancreas, showing Saccular Dilatation of its Ducts.

The pancreatic duct has been obstructed, about one inch from its entrance into the intestine, by cirrhotic inflammation of the surrounding tissue of the pancreas. The duct behind this point is distended into large pouches with thin fibrous partitions; the secreting structure of the gland is destroyed, and in one place, at least, perforation of the pouches has occurred. The common biliary duct had also formerly been compressed, and the patient was deeply jaundiced until death.

Case of a man in the Pennsylvania Hospital.

1428.—Spleen, showing Pyæmic Deposit.

The spleen is lobulated and enlarged, measuring five inches and a half in length and four inches in breadth. The splenic pulp was of a bright red color. There is a pyæmic deposit, an inch and a half in circumference

on the anterior surface, immediately beneath the capsule, which is here covered with lymph.

From a patient whose arm was amputated in the Pennsylvania Hospital for gunshot injury, and who died one month subsequently from pyæmia. Pus was found in the veins of the stump.

1429.—Spleen, showing Abscess.

The spleen is rather large, and at the lower end, immediately beneath the capsule, there was about half a fluidounce of ichorous matter in a cavity, with somewhat firm, yellowish walls about two lines thick. This fluid contained shrivelled granular cells, altered blood-corpuscles, granular matter, and pigment. The blood was dark and fluid. No other lesions existed.

Case of P—, a German, æt. 45, who, for six weeks previous to his death, presented the following symptoms: painful swelling of the right knee; very frequently repeated, irregular chills, followed by profuse sweats, and not controlled by quinia; and finally coma, and petechiæ and vibices over the surface. No injury at all is known to have been received.

Dr. GEORGE PEPPER, Proc. Path. Soc., Dec. 27, 1866.

1432.—Spleen, showing Miliary Tubercles.

The specimen shows the anterior surface of the organ, which is studded with round, yellow, miliary tubercles about one-sixth of an inch in diameter. The entire organ was packed with similar deposits.

From a patient who died from tuberculous peritonitis in the Pennsylvania Hospital. (See Spec. 1450.)

1434.—Spleen, showing Cancerous Nodule attached near its Hilum.

The spleen is small, and its tissue apparently healthy. The capsule over its external surface is healthy; but on the inner surface there is a cancerous nodule, about an inch in diameter, springing from its capsule near the hilum. The surface of this nodule presents numerous filamentous adhesions, and the rest of the capsule over the inner face is thickened and rough from torn adhesions.

From the case which furnished specimens 1454, 1455, and 1496.

1439.—Thickened Hernial Sac.

Case of John Hagy, æt. 55, admitted to the Pennsylvania Hospital March 6, 1866, with hernia and obstruction of the bowels from constriction of the ileum by a band of organized lymph. (See Spec. 1315³.) The hernial tumor had existed for five years, had a peculiar feeling of hardness, and, on compression, gave rise to a crackling sound. The sac was opened, and found to contain no bowel; its constricted portion was ligated, and the rest cut away. It was very tightly adherent to the surrounding tissue; its walls were dense, in places fully two lines in thickness; and its inner surface had altogether lost the appearance of serous membrane.

1440.—Omental Hernia.

The hernial sac is about five inches in length, and rather more than an inch in diameter. Its contents consist of a large piece of the omentum, which has escaped through the internal abdominal ring.

History unknown.

1441.—Omental Hernia.

The entire omentum has been involved in the hernia, and has become moulded into the shape of the sac. There is marked induration of the omentum, probably from the organization of lymph, so that the mass is as tough as India-rubber, and its surface is covered by a semi-opaque whitish membrane.

From a man, æt. 78, who had had a readily reducible double inguinal hernia, which became incarcerated the day before his admission into the Pennsylvania Hospital. An operation was performed for its relief by Dr. Pancoast, but the patient died on the third day, from pulmonary cedema.

1442.—Omental Hernia.

The scrotum is seen laid open, showing a large portion of omentum which has descended along the cord. The hernial sac is separated from the testicle by a thick, dense membrane.

Case of A. L., æt. 45, admitted to the Pennsylvania Hospital for scrotal hernia which had been strangulated for three days. An operation was performed, and the sac found to contain a small knuckle of intestine, and a large mass of omentum in a state of incipient sphacelation. The patient died of exhaustion two days afterwards.

1450.—Tuberculous Peritonitis.

The intestines are matted together closely by very numerous false adhesions, which, for the most part, appear as delicate filaments. The peritoneum can also be seen to be thickly studded with yellowish miliary tubercles.

Case of a colored man, æt. 30, admitted to the Pennsylvania Hospital with general tuberculosis, from which he died August 6, 1861. At the autopsy, the pericardium contained eight ounces of serum, and the lungs were filled with miliary tubercles.

1451.—Tuberculous Omentum.

The omentum has lost all traces of its natural appearance, and forms a firm mass about eight inches wide, four inches long, and from a third to half an inch thick. Its inferior border is thick and rounded, its external surface smooth and dense-looking, and, on close inspection, numerous miliary tubercles can be seen beneath the peritoneum. On making a section, the tissue is found to contain very numerous small grayish-yellow tubercles, imbedded in dense, organized lymph.

Case of Weissbach, a German, of intemperate habits, admitted to the Pennsylvania Hospital with ascites and cedema of the legs. A firm tumor could be felt across the upper part of the abdomen, which was at first thought to be the edge of an enlarged

liver. Cough, with colliquative diarrhoea, supervened, and he died from exhaustion. At the autopsy, the lungs were found to contain numerous miliary tubercles. The liver was quite healthy; the peritoneum was studded throughout with miliary tubercles, and there was a large amount of serum in its cavity. There were also numerous tuberculous ulcers of the intestines. The omentum was much contracted and thickened, and occupied the upper part of the abdomen.

1453.—Intestines, showing Cancerous Adhesions.

In places the folds of intestine are completely hidden by a dense layer of organized lymph; in other places the surface of the intestine, where the adhesions have been separated, is rough and shaggy, and studded with numerous very small yellowish-white nodules.

Case of a man who died with cancer of the abdominal viscera.

1454.—Cancerous Nodules in the Omentum.

A section of the stomach is seen, showing a healthy appearance, but from its greater curvature hang several oval cancerous masses, the largest fully three inches long. These are united to each other, and to the stomach and adjacent viscera, by strong bands of organized lymph.

Case of Mrs. B., æt. 62, who died of extensive cancerous disease, affecting the serous membranes and the left ovary.

Dr. S. W. MITCHELL, Proc. Path. Soc., March 27, 1867.

1455.—Cancerous Nodules on the Peritoneum.

The portion of the peritoneum is thickened and opaque, and presents, on its free surface, numerous cancerous nodules, not exceeding a third of an inch in diameter, either isolated or matted together.

From the same case as the above.

RESPIRATORY SYSTEM.

1460.—**Larynx, showing Tubercular Ulceration.**

The posterior surface of the epiglottis presents a gnawed, reticulated appearance, from the presence of very numerous small ulcers. The edges of the vocal cords are thickened and irregular. The mucous membrane on the anterior half of the larynx presents a similar, though less marked, reticulated condition.

Case of a man who died of tuberculosis in the Pennsylvania Hospital.

Presented by Dr. A. D. HALL.

1461.—**Larynx, showing Tuberculous Ulceration.**

The epiglottis and vocal cords are quite healthy, but on the anterior and lateral parts of the larynx and trachea there are numerous quite large ulcers, of irregular size, with ragged, thickened edges, and so deep as to have bared the tracheal rings in several places.

Case of a woman, *æt.* 50, admitted to the Pennsylvania Hospital September 18, 1858, having had a cough for two years, and for some days stridulous breathing and intense dyspnoea. Ten days after admission, she was attacked at midnight with croupy cough, and died before morning. The larynx was found almost completely closed with oedematous swelling from the glottis to the bifurcation of the trachea.

Presented by Dr. A. D. HALL.

1462.—**Larynx and Trachea, showing Syphilitic Ulceration.**

There are two ulcers in the larynx, each about half an inch in diameter, with sharply-cut edges. One of these is situated just below the anterior junction of the vocal cords, and is rather superficial, extending down to the perichondrium. The other is situated over the cricoid cartilage, on the left side, and has extended so deeply as to involve the cartilage, and discharge externally, forming an abscess external to the larynx, two and a half by two inches in size. This abscess had thick, dense walls, and contained thin, fetid pus.

Case of an Irishwoman, *æt.* 36, admitted to the Pennsylvania Hospital August 31, 1857, and who died the following day from oedema of the glottis. There were two excavated chancres with indurated bases on the right labium externum (see Spec. 1726). There was no tuberculous deposit in the lungs.

Presented by Dr. A. D. HALL.

1463.—**Larynx and Trachea, showing Contraction from Syphilitic Ulceration.**

The posterior surface of the epiglottis, near its base, presents an irregular, cicatricial appearance. The left upper vocal cord is so drawn upon by

these cicatrices as to be to a great extent obliterated. There are several small, depressed cicatrices in the larynx, but the most marked lesions are immediately below the cricoid cartilage, where adhesion and cicatrization have occurred, so that the trachea is almost occluded by a dense fibrous plate which occupies two-thirds of its calibre. There is also marked constriction of the tube at this point. Throughout the trachea there are numerous cicatrices, linear or of irregular shape, which induce a slight degree of contraction. The cricoid cartilage is diseased in its right postero-lateral portion.

Case of a man in the Pennsylvania Hospital, who had contracted syphilis very many years before in China, and had suffered with a throat affection, which was relieved, but had left him suffering with aphonia.

Presented by Dr. A. D. HALL.

1465.—Larynx and Trachea, showing Plastic Exudation.

The tonsils are seen to be very much enlarged, and there are large flakes of pseudo-membrane partially investing and hanging from them, some of which also line the posterior part of the pharynx. This pseudo-membrane is of a grayish color, and about one line in thickness. The same deposit invests the epiglottis, and is continuous over the glottis into the larynx and trachea, becoming thinner and more white.

Case of a girl, æt. 22, admitted to the Pennsylvania Hospital December 23, 1858, suffering with chronic bronchitis. On the 19th of the following month she was attacked with dysphagia, rapid and extreme enlargement of the tonsils, and dyspnoea, which proved fatal on the 23d.

Presented by Dr. A. D. HALL.

1468.—Larynx, showing Oblique Comminuted Fracture.

The fracture involved the thyroid and cricoid cartilages, and extended through the base of the right arytenoid, dislocating and driving it through the mucous membrane. There was œdema of the glottis, and œdema and ecchymosis of the aryteno-epiglottidean folds.

Case of P. M., æt. 45, admitted to the Pennsylvania Hospital January 16, 1866, having been struck over the larynx by a piece of wood. There was emphysema of the neck, bloody sputa, and rapidly increasing dyspnoea. Tracheotomy was performed, but he died in eighteen hours; and at the autopsy marked emphysema of the anterior mediastinum and deep congestion of the lungs were found.

Dr. W. HUNT, *Am. Journ. Med. Sci.*, vol. ii. p. 378, April, 1866.

1470.—Cyst from Thyroid Gland.

The tumor is round, about one inch in diameter, and of a fibro-cystic character.

Removed by Dr. Pancoast, in the Pennsylvania Hospital, from a woman, æt. 30. She made a good recovery.

1472.—Minute Bronchial Tubes injected with Red Wax.

Presented by Dr. T. G. MORTON.

1473.—Lung, showing Condensation from Hydrothorax.

The pleura is much thickened, and opaque. There do not seem to have been many false adhesions. The lung is much reduced in size, and of tough and leather-like consistence.

Case of D. P., æt. 65, who had had dilated hypertrophy of the heart and chronic hydrothorax for some time before his death.

Presented by Dr. T. G. MORTON.

1474.—Lung, showing Pyæmic Deposits.

Case of a boy, æt. 14, whose hand was amputated in the Pennsylvania Hospital, and who died of acute pyæmia after the stump had almost healed. The lungs were intensely congested, and presented numerous subpleural nodules, varying in size from a third of an inch to one inch in diameter, of yellowish and quite firm consistence, but few of them having softened in the centre. The liver contained a large abscess.

1478.—Lung, showing Pigmentary Deposits.

Case of a young miner who died in the Pennsylvania Hospital from the results of a railroad injury. The lungs were apparently healthy, but dark colored, and numerous little masses of pigment, as large as buckshot, are seen scattered throughout the tissue.

1480.—Lung, showing Miliary Tubercle.

The tissue of the lung is thickly studded with grayish-yellow miliary tubercles about the size of hemp-seed. These have not undergone any softening, and project slightly above the cut surface of the lung, giving it a granular appearance. In places the tubercles are clustered together so as to form knots about a sixth of an inch in diameter.

Case of a colored girl, æt. 18, who had suffered for many weeks with persistent intermittent fever in the South. No morbid signs were manifest in the lungs until two weeks before death, when moderate dulness, with sonorous and sibilant râles, appeared. There was a little dry cough for a few days before death. At the autopsy the tubercles were found disseminated through both lungs, and the kidneys, spleen, and liver also contained tubercles.

1481.—Lung, showing Miliary Tubercle.

The tissue of the lung is thickly studded with grayish-yellow miliary tubercles about the size of hemp-seed. There is no alteration of the pleura, so that the tubercles can in places be seen through it. No softening has occurred, and the tubercles stand out slightly above the cut surface.

Case of a negro man who died eleven weeks after amputation of the leg, having presented symptoms of disease of the lungs for but a few days. (See Spec. 1180.)

1483.—Lung and Bronchial Glands, showing Tuberculous Disease.

The upper lobes of the right lung are infiltrated with gray tubercle, and a cavity two inches in diameter, with irregular, ragged walls of yellow, cheesy tubercle, exists at the anterior border of the upper lobe, extending upwards from its junction with the middle lobe. The bronchial glands are

enlarged, forming a mass about the size of a hen's egg, and most of them contain tuberculous deposit. The left lung presented a slight degree of disease, and there was also tubercular peritonitis in the upper part of the abdomen, with a few tubercles in the spleen.

Case of Fanny —, *set.* 3, admitted to the Children's Home September 1, 1866. She had suffered with measles, followed by diarrhoea, cough, emaciation, and the physical signs of a cavity near the right apex. Death occurred December 1, 1866.

Dr. W. PEPPER, *Proc. Path. Soc.*, Dec. 26, 1866.

1484.—Lung, showing Cavities and Cheesy Deposits.

The pleura is not much thickened, though there have been numerous false adhesions both between the lobes and between the costal and visceral pleura. The upper lobe is to a great extent hollowed out, so as to form a large anfractuous cavity, with numerous chambers of different sizes, and thick septa, many of which contain bloodvessels. This cavity approaches closely to the pleura, especially at the apex. Its walls are smooth, dense, and fibrous in appearance. Its original contents have been entirely evacuated. Throughout the lower lobe there are numerous yellow, cheesy nodules, varying in size from a line to half an inch in diameter. Nearly all of these are clearly seen to be surrounded by a capsule, as though they might be contained in the expanded extremities of the bronchial tubes.

Case of a patient in the Pennsylvania Hospital.

1485.—Right Lung, showing Old Tuberculous Cavities.

The pleura is very much thickened, forming a cap over the apex fully a third of an inch thick; and where the fissure between the upper and middle lobes originally was, there is a band of dense fibrous tissue, half an inch wide. The upper lobe contains an oval cavity, an inch and three-quarters long, with a thin, trabeculated, fibrous wall; the surrounding lung-tissue is contracted, intersected by numerous fibrous bands, and contains much pigment. There is also an oval cavity, two inches and a half long, in the middle lobe, with a distinct fibrous wall, lined by a slightly shaggy, rough membrane. The surrounding lung-tissue is less indurated than in the upper lobe.

Case of a male adult who died in the Pennsylvania Hospital with chronic phthisis.

1488.—Lung, showing Gunshot Wound.

The ball has traversed the apex of the lung, and the track is seen surrounded by a yellowish, shreddy slough. The entire surface of the lung is covered by a thick grayish-yellow pseudo-membrane.

Case of a child admitted to the Pennsylvania Hospital, having received a gunshot wound, the ball splintering the clavicle and passing under the jugular vein through the apex of the lung. It was subsequently extracted beneath the trapezius muscle. There was also extensive pleuro-pneumonia, and a gangrenous condition of the lung at the wound. (*See Spec.* 1063.)

1490.—Pleura, showing False Membrane.

The pleura is much thickened, and presents externally a dense, white fibrous layer, lined by a soft, grayish-yellow layer of pseudo-membrane about the sixth of an inch in thickness. A section of this inner layer shows it to be composed in great extent of close-set filaments, though in its deeper portions it appears truly membranous. The free surface is in places quite smooth; in others rugous, like the gastric mucous membrane; and in others, again, flocculent or shaggy.

Case of a boy, *set. 17*, admitted to the Pennsylvania Hospital with chronic pleurisy of the left side. Paracentesis was frequently performed, and from a pint and a half to two pints of pus were drawn off daily for two weeks before his death. The lung is compressed and dense, and the fibrous tissue throughout its substance much increased.

Presented by Dr. T. G. MORTON.

1491.—Pleura, showing False Membrane.

The specimen shows the right lung from a case of chronic pleurisy. The lower and middle lobes are invested by a well-organized false membrane, which, after passing some distance on to the upper lobe, is reflected on to the costal surface, thus forming a closed sac, and limiting the effusion. The surface of the false membrane is quite smooth; its thickness varies from a mere film to more than a line, and its color is of a uniform grayish yellow. There was a small amount of effusion below this layer of false membrane.

Case of a German admitted to the Pennsylvania Hospital in the first stage of typhoid fever, but giving the history of a previous sickness of four weeks. In addition to the typhoid symptoms, there was dulness on the right side, both anteriorly and posteriorly, continuous with the hepatic dulness, up to the level of the fourth rib. Above this, the percussion was tympanitic. The respiratory murmur over the area of dulness was distant or absent. The line of dulness was not modified by altering the position of the patient. There were no abnormal signs in the left lung, save sonorous and sibilant râles, and some fine, moist râles. Death occurred five days after admission, and at the autopsy extensive ulceration of the glands of Peyer was found, with hypostatic congestion of the lungs.

1492.—Pleura, showing False Membrane.

The pleural sac was entirely obliterated; and on separating the lung, it is found closely invested by a thin layer of well-organized, grayish lymph, which in places is intimately blended with the pulmonary pleura, and at others is adherent to it by short bands. The external surface of the false membrane is in places roughened or filamentous, from the separation of its attachments to the costal pleura.

Case of a patient who died in the Pennsylvania Hospital.

1493.—Pleura, showing Fibrous Patch.

The specimen shows a patch, about an inch and a half by half an inch in size, at the apex of the lung, where the pleura is much thickened, and of a

pure white, opaque appearance. There does not seem to have been any adhesion of the pleura at this point.

Case of a patient who died in the Pennsylvania Hospital.

1494.—Pleura, showing Ossific Plate.

The bony formation is about four inches long, by rather more than half an inch in width. It consists of an outer compact layer, and a small amount of cancellated structure within, and, on microscopic examination, presents true bone lacunæ, and canaliculi. It was found between the lobes of the left lung, enveloped in white fibrous tissue, and imbedded between the two layers of the pleura.

Case of a German who died in the Pennsylvania Hospital from injuries received in a railroad accident.

Presented by Dr. H. L. HODGE.

1496.—Cancer of Pleura.

The specimen shows an almost hemispherical nodule of encephaloid cancer, about three-quarters of an inch in diameter, lying in the posterior part of the fissure, between the upper and middle lobes of the right lung, and attached to the pleura by strong adhesions. The lobes of the lung are adherent to each other, and there are two similar, though smaller, nodules in the pleura at the bottom of the fissure.

Case of cancer of the serous membranes, which furnished specimens 1434, 1454, and 1455.

Dr. S. W. MITCHELL, Proc. Path. Soc., March 27, 1867.

CIRCULATORY SYSTEM.

1500.—Heart, showing Patulous Foramen Ovale in Adult.

The valve of the foramen is sufficiently large, but has remained in part unattached, so that there are two openings, through either of which a good-sized goose-quill could be passed, which are separated by a short and narrow band which connects the middle of the edge of the valve to the septum of the auricles.

Case of a patient in the Pennsylvania Hospital.

1500^s.—Heart, showing Patulous Foramen Ovale in Adult.

The valve is sufficiently large to close the foramen, but has remained unattached, so as to leave an oblique opening through which a tube a third of an inch in diameter could be passed.

Case of Charles Howard, a lad who died of typhoid fever in the Pennsylvania Hospital.

1501.—Heart, showing the Origin of the Aorta from both Ventricles.

The heart is rounded. The cavities of the ventricles are not much enlarged, nor is there any hypertrophy of the walls of the left ventricle. The walls of the right ventricle are, however, decidedly thickened, though not equalling those of the left. The septum ventriculorum is disproportionately thick, and terminates, about a third of an inch below the level of the origin of the aorta, in a smooth, rounded edge, over which the endocardium is thickened. The septum also seems inside of its normal position, so as almost to bisect the aortic orifice. The aorta, which is slightly dilated, but quite healthy, thus communicates freely with both ventricles. The origin of the pulmonary artery is very much obstructed, owing to coalescence and contraction of its valves. The ductus arteriosus was, unfortunately, not preserved, but, owing to the large size of the pulmonary artery beyond the seat of contraction, it had in all probability remained patulous. The foramen ovale was closed.

Case of a young man, *æt.* about 22, who had been markedly cyanotic from infancy, and was poorly developed. He was unable to maintain a proper temperature. He suffered constantly from slight dyspnoea, with occasional exacerbations. At the autopsy there was marked congestion of the abdominal viscera, and the gall-bladder was packed with gallstones. Both lungs contained numerous yellow miliary tubercles.

Presented by Dr. C. H. THOMAS.

1504.—Heart, showing Eccentric Hypertrophy.

The left ventricle is specially affected, its cavity considerably enlarged, and its walls thickened. The right cavities of the heart are much less

affected. The papillary muscles of the left ventricle have undergone fatty degeneration. The aortic and pulmonary valves were healthy and sufficient. The mitral valve was somewhat thickened with a deposit of a few nodules of calcareous matter; it was also insufficient.

Case of a patient, æt. 61, in the Pennsylvania Hospital, who had suffered with cardiac disease for a long time, attended with oedema of the legs. The action of the heart was very irregular, feeble, and frequently intermittent, and there was a slight but distinct systolic bruit.

Presented by Dr. J. H. HUTCHINSON.

1505.—Heart, showing Simple Dilatation.

The cavity of the left ventricle is very much dilated, its walls, however, remaining of about normal thickness. The endocardium is much thickened in places, especially towards the apex, and there are numerous spots in the walls where the muscular tissue has undergone fibroid change. The right cavities of the heart are comparatively slightly affected, and the muscular tissue of their walls appears quite healthy. The left auricle is also in a state of marked eccentric hypertrophy. The aortic valves appear healthy and sufficient. The leaflets of the mitral are somewhat thickened and contracted, and present several cartilaginous patches.

Case of a patient who died in the Pennsylvania Hospital. No history.

1508.—Heart, showing Mitral Thickening, and Vegetations on Mitral and Aortic Valves.

The leaflets of the mitral valve are much thickened, and rigid, so as to form a funnel-like projection into the left ventricle, the effect of which is increased by the thickening and coalescence of the chordæ tendinæ. There is also fibroid change of the papillary muscles, extending from their free end for a varying distance. There are also, on the auricular surface of the leaflets, broad patches of low vegetations. The aortic leaflets are less thickened and rigid, but present projecting vegetations which, to a great extent, obstruct the aortic orifice.

Case of a patient in the Pennsylvania Hospital. No history.

Presented by Dr. A. D. HALL.

1509.—Heart, showing Mitral Disease.

The leaflets of the mitral valve are thickened and rigid, and the mitral orifice is converted into an oval opening about two-thirds by one-third of an inch in size. At one end of the opening there is a large patch of friable, granular, calcareous matter.

Case of a patient in the Pennsylvania Hospital. No history.

1510.—Heart, showing Aortic and Mitral Disease.

The mitral leaflets are thickened and rigid, and present small calcareous nodules on their auricular surface. The chordæ tendinæ are much thickened, and the mitral orifice converted into a shallow funnel-like projection

into the left ventricle, with a long slit-like opening. The aortic leaflets are much thickened, and opaque, but seem sufficient; there are two points of disease on their free edges, where the surface is roughened from the incipient formation of vegetations.

Case of a patient in the Pennsylvania Hospital. No history.

1511.—Heart, showing Aortic and Mitral Disease, with Pericarditis.

The aortic leaflets are thickened and rigid, and present an abundant growth of vegetations, principally attached to the free border or the ventricular surface. These are especially marked on the anterior leaflet, where there is a patch of large condylomatous vegetations continuous down on to the mitral leaflet. The mitral valve is also much thickened, and presents on its auricular surface large patches of prominent vegetations. The pericardium is covered in numerous places with a thin layer of organized lymph, which presents a roughened, granular surface.

Case of a patient in the Pennsylvania Hospital. No history.

1512.—Aortic and Mitral Disease.

The mitral valves are thickened, and present numerous fringe-like vegetations on their free edges and on the chordæ tendinæ; there is a large patch of vegetations on the auricular surface of one of the leaflets. The aortic orifice is partially obstructed by vegetations springing from its valves. The left ventricle presents marked eccentric hypertrophy; the right cavities are not much dilated, and their walls are thinned.

Case of a young soldier who was admitted to the Pennsylvania Hospital with symptoms of advanced cardiac disease.

1518.—Heart, showing Calcareous Incrustation of Aortic Valves.

The heart is in a state of eccentric hypertrophy; the muscular tissue of its walls rather softer than natural, and slightly fatty under microscopic examination. The aortic valvules are very rigid, but on the arterial side the membrane investing them is smooth, with the exception of one or two points; on the ventricular side, however, the valvules are thickly incrustated over a great part of their surface with hard calcareous matter, in the form of small nodules or scales. This deposit caused a moderate degree of narrowing of the aortic orifice. About half an inch below the origin of the aortic valves there is a ridge of dense fibrous tissue, running parallel to them. The mitral valve is competent; its leaflets are somewhat too thick, but without any calcareous formation. The valves of the right side of the heart are perfectly healthy.

Case of P. L., æt. 28, admitted to the Pennsylvania Hospital December 24, 1864, under the care of Dr. Da Costa, having been troubled with cardiac disease for twelve years. The impulse was extended, and accompanied by a purring tremor. A double blowing sound could be readily detected. The pulse was slightly receding in character. There was a marked tendency to epistaxis. Death occurred March 17, 1865.

1519.—Heart, showing Cartilaginous Nodules on Aortic Valves.

The aortic leaflets are thickened, and present several patches of cartilaginous appearance on their ventricular surface. At the attached extremity of one of the leaflets is a nodule as large as a pea (a quarter of an inch in diameter); this is situated between the layers of endocardium forming the valve, which has ruptured along the free edge of the leaflet.

Case of a patient in the Pennsylvania Hospital. No history.

1520.—Aortic Disease, followed by Embolism of Cerebral Artery.

The aortic valves are insufficient, and their ventricular surface is covered with vegetations, some of which are filamentous and attached by thin pedicles; one leaflet has been ulcerated through from its free edge nearly to its base of attachment.

Case of Mary Foley, *æt.* 21, admitted to the Pennsylvania Hospital April 26, 1866, with cardiac disease. Soon after admission, complete left-sided hemiplegia appeared suddenly, and she died September 13. There was a clot in the right middle cerebral artery, with white softening of the right middle and anterior cerebral lobes. (See Spec. 1231.)

1525.—Heart, showing Perforation of Pulmonary Valvule.

There is an irregularly quadrangular perforation, capable of admitting a large goose-quill, near the attached extremity of one of the leaflets of the pulmonary valve. At the edge of this is a single small, pediculated vegetation. The pulmonary valvules are large and very thin. The aortic valves were healthy. The mitral valves were thickened and opaque, with a fibroid deposit in one of the curtains.

Case of a man, *æt.* 42, admitted to the Pennsylvania Hospital with dyspnoea and large bronchial râles over the posterior part of the chest. Over the base of the heart was heard a double sawing sound, completely obscuring the normal sounds. Death occurred suddenly.

1527.—Heart, showing Stab of Left Ventricle.

The wound, which has been caused by a long, slender-bladed knife, is seated near the apex of the left ventricle, on the posterior wall, near its junction with the anterior wall. It is half an inch in length, and transverse to the external layer of muscular fibres. On the exterior of the heart the wound gaped about a quarter of an inch, but within the sides were in contact. Upon opening the left ventricle, the wound contained a little plug of fibrin or lymph. The wound communicated with the ventricle only at one corner, about an eighth of an inch in length. The pericardial cavity contained about four ounces of bloody serum, and the membrane was already injected and covered with minute patches of lymph. The knife had penetrated both surfaces of the pleura, passed through the lower edge of the upper lobe of the left lung, and through the pericardium. The pleural cavity contained about ten ounces of fluid blood and some coagula.

Case of H. W., admitted to the Pennsylvania Hospital with a penetrating wound of

the chest, received the night previous. The wound was situated between the fifth and sixth ribs, and a little to the left of the left nipple; it was an inch and a half in length, and penetrated forward, inward, and downward. Air and blood passed freely from and into the pleural cavity during respiration. The action of the heart was feeble and irritable. Great restlessness came on, and death occurred thirty-six hours after the reception of the injury.

1528.—Heart, showing Stab of Left Ventricle.

The wound, which was caused by a quite broad-bladed dirk, involves the anterior wall of the left ventricle, half an inch above the apex, to the extent of three-quarters of an inch. Some attempt at closure was seen in the interior of the heart, and there was marked inflammation of the pericardium, which contained a few ounces of bloody serum. The knife had penetrated the cartilage of the sixth left rib, puncturing the upper lobe of the left lung. The pleural cavity contained four pints of bloody serum.

Case of a colored boy, æt. 19, admitted to the Pennsylvania Hospital with a penetrating wound of the chest, one inch long, and in a line with and two inches below the left nipple. There was complete collapse of the lung, and at each inspiration the blood poured from the wound. He suffered from great dyspnoea, prostration, and coldness of the surface, and died on the evening of the fourth day.

1529.—Heart, showing Gunshot Wound.

The ball has cut through the side of the right ventricle, about one inch above the apex, so as to plough a furrow in the muscular tissue, and lay open the cavity of the ventricle to a slight extent.

No history.

1533.—Ante-Mortem Heart-Clots.

One of the clots is from the right side, shows a prolongation into both divisions of the pulmonary artery, and bears, to a slight degree, the impress of the pulmonary valves. The other is from the left side, and shows a prolongation into the aorta. They are both whitish, firm, and dense, and were tightly adherent to the lining membrane of the heart.

No history.

1534.—Ante-Mortem Heart-Clots.

The clots are very firm, and quite white, save in the centre, where, at the time of removal, there was a light reddish color. The largest portion occupied the right auricle, extending upwards into the vena cava, jugular veins, and their radicles; it also extended into the right ventricle, and was prolonged into both pulmonary arteries almost to their finest ramifications. There is a distinct impression of the leaflets of the pulmonary valves remaining on the clot, showing where it was moulded upon these structures.

Case of a male adult who was admitted to the Pennsylvania Hospital with delirium tremens, in a very prostrate condition, and died in a few hours with symptoms of extreme circulatory embarrassment.

1535.—Heart, showing Softened Fibrin in its Cavities.

The right ventricle is laid open, showing the anfractuositities of the columnae carneae filled with yellowish-white fibrinous masses, many of which have undergone central softening, so as to form small cyst-like bodies.

Case of a boy who died in the Pennsylvania Hospital of pyæmia following a compound fracture of the humerus. There were numerous pyæmic deposits, many of them softened in the centre, in the kidneys and lungs, and the pleural cavity contained a large amount of lymph and serum.

1540.—Heart, showing Adherent Pericardium.

The aortic and mitral valves are very thick and rigid, and there is marked dilatation, with very slight hypertrophy, of the left ventricle. The two layers of the pericardium were tightly adherent throughout a great part of their extent, and present marked thickening and opacity, with the formation of layers of organized lymph, which hang in long bands from the surface of the heart.

No history.

1541.—Heart, showing Pericarditis.

The heart is covered throughout by a layer of lymph, which is extremely delicate and thin over the ventricles, but becomes thicker over the auricles and origin of the great vessels.

Case of a man admitted to the Pennsylvania Hospital, October 20, 1857, with a penetrating wound of the right thorax, between the second and third ribs. The right pleural cavity was opened, and the finger, on being introduced, could feel the action of the lungs and heart. The wound closed, but empyema supervened, and, on opening the wound, large quantities of pus were drawn off from the cavity. He sank, and died seven days after the injury. At the autopsy the right lung was found covered with lymph, and the pleural cavity filled with pus.

Presented by Dr. T. G. MORRIS.

1543.—Pericardium, showing Calcareous Deposit.

There are numerous small, slightly elevated, cartilaginous patches upon the pericardium, most of which present some calcareous deposit in their centres.

Case of a patient in the Pennsylvania Hospital. No history.

1544.—Pericardium, showing Calcareous Deposit.

A portion of the pericardium has been dried, showing several irregular, elevated plates and spicules of calcareous matter. None of these deposits exceed a third of an inch in diameter.

Case of a patient in the Pennsylvania Hospital. No history.

1550.—Aorta, showing Atheromatous Disease.

The inner coat is much roughened by the formation of numerous elevated patches, many of which are still fibroid, though calcareous deposit has

occurred in some, and has caused them to split off from the surface. The disease is most marked just above the valves, though it continues throughout the arch. The valves of the heart present a less degree of the same disease.

From a man in the Pennsylvania Hospital, æt. 60, who had been a subject of syphilis, and fell dead suddenly while going down stairs.

1551.—Aorta, showing Atheroma and Calcification.

The entire wall of the aorta, from its valves throughout the arch, is thickened and rigid, and the calibre of the vessel is considerably dilated. The inner surface presents a vast number of plates and scales, some of which are still fibroid, though calcareous deposit has occurred in most of them, and converted them into hard, friable scales, many of which are partly separated from the wall of the vessel. The orifices of the vessels which arise from the arch are not much involved. The aortic valves present a slight degree of similar disease.

No history.

1552.—Aorta, showing Atheroma and Aneurismal Dilatation just above its Valves.

There is marked atheroma of the aorta for several inches above its origin, and an aneurismal dilatation of the posterior wall has occurred just above the valves, so as to form a sac-like projection, about two inches in diameter, from the vessel. The internal coat continues uninterruptedly over the pouch.

No history.

1553.—Aneurism of Ascending Part of Thoracic Aorta.

The heart is quite small, but the aorta begins to dilate just above the valves, and presents a huge aneurismal sac which extends from an inch above the valves to the origin of the innominate. The sac, which is at least five inches from right to left, by three inches from above downwards, is formed entirely by a saccular protrusion of the right side of the arch. The anterior wall is also partly involved. The walls of the aneurism are thick and dense, and atheromatous on their inner surface. The tumor has formed strong adhesion with the upper lobe of the right lung, which is a good deal thinned out by its pressure. The right bronchus has also been considerably compressed.

No history.

Presented by Dr. McCALL.

1554.—Aneurism of Aorta, opening into Right Bronchus.

The heart is of about normal size, and the aortic valves are healthy. There is, however, a large sacculated aneurism of the upper wall of the arch, extending from one inch and a half above the valves to the origin of the innominate. The cavity of the aneurism is to a great extent filled

with firm laminated clots; its walls are thick, dense, and atheromatous; the right bronchus is tightly adherent to the posterior surface of the aneurism; and presents, at its very beginning, an opening half an inch in diameter, communicating with the aneurismal sac.

No history.

1555.—Aneurism of Arch of Aorta.

The heart is not materially enlarged. There is a saccular aneurism, about five inches in diameter, springing from the postero-inferior aspect of the aorta. The orifices of the great vessels springing from the arch are not materially implicated. The walls of the sac are thick and dense, and the cavity is to a great extent filled by firm laminated coagula.

Case of a man, *æt.* 50, who contracted the disease while at hard work in California. The tumor, when first seen, was observed as a pulsating mass over the right costal cartilages inside of the nipple. It had also produced some absorption of the ribs. The surgeon who first saw it poulticed it, thinking it an abscess, and finally punctured it. The same evening the patient died of hemorrhage.

Presented by Dr. T. G. MORTON.

1556.—Aneurism of Ascending Aorta.

The heart presents a marked degree of eccentric hypertrophy, especially of the left ventricle. There is an oval dilatation of the aorta just above its origin, and a saccular aneurism springing from the upper wall of the arch just before the origin of the innominate. The sac, which is about four inches in diameter, communicates with the aorta by an opening not more than one inch in diameter. The aneurism is closely adherent to and has produced some absorption of the manubrium. The vessels arising from the arch are pushed towards the left.

Presented by Dr. WILSON, of Cuba.

1557.—Aneurism of Ascending Part of Arch of Aorta.

The heart is moderately enlarged. The pericardium was adherent throughout its entire extent. The aneurismal sac, which is about seven inches in diameter and almost spherical, involves the entire aorta from two inches above the heart to the origin of the left carotid. The size of the great vessels is not materially changed, but the course of the innominate is so much changed, from its orifice having been elevated, that it is directed almost horizontally backwards; and the distance between its origin and that of the left carotid is at least two inches. Considerable absorption of the sternal part of the second and third left ribs has occurred, and an oval tumor is seen projecting from this place. The walls of the sac are not materially thickened, and are coated with layers of firm coagula.

Case of a Frenchman, *æt.* 34, admitted to the Pennsylvania Hospital December 26, 1860. His health had been good until August of the preceding year, when he felt sharp pains in the region of the heart. During the last nine months a pulsating

tumor had made its appearance a little to the left of the sternum, on a level with the third rib, and had increased until, on admission, it was as large as a small orange. Deglutition was interfered with, and he was seized with violent dyspnoea, and died soon after admission.

1558.—Aneurism of Thoracic Aorta, and Atheroma of Pulmonary Artery.

The heart is moderately enlarged; the aorta is highly atheromatous, and presents throughout its thoracic portion a series of three oval aneurismal dilations. The largest of these is in the descending portion, just above the diaphragm, and is about two inches and a half in diameter by five inches in length. The origin of the great vessels does not seem much interfered with. There is quite a large patch of atheroma in the pulmonary artery, just above its valves.

Case of a patient in the Pennsylvania Hospital. Death occurred from rupture of the lower sac and hemorrhage into the pleural sac.

1559.—Aneurism of Descending Aorta.

The coats of the vessel, both above and below the seat of disease, are quite healthy. For a space of about two inches, however, the inner coat is much corrugated, and presents very numerous patches of atheroma. The aneurismal sac, which is in the shape of a flattened sphere, about two inches in diameter, and almost completely filled with firm coagula, communicates with the aorta by an opening rather more than an inch in diameter, with an irregular, rounded edge.

Case of a patient in the Pennsylvania Hospital. No history.

1561.—Aneurism of Innominate Artery.

The heart shows slight mitral disease. The ascending part of the arch of the aorta is dilated and atheromatous, and the aneurism involves part of the upper wall of the aorta and the entire innominate artery, forming a tumor more than four inches in diameter. This cavity is to a great extent filled with clots, resulting from ligation of the carotid. The left pneumogastric nerve is seen losing itself on the front surface of the aneurism; the right nerve was also much compressed. The recurrent laryngeal nerves, especially the right one, are also seen to be strongly pressed upon.

Case of John Granfield, æt. 51, who had presented symptoms of aneurism of the innominate for some time. The specimen was obtained after ligation of the right common carotid, followed by death on the seventh day.

Dr. Hewson, Pennsylvania Hospital Reports, vol. i. p. 219.

1563.—Right Common Carotid, after Ligation.

The specimen shows the artery occupied by a firm, partly decolorized clot, down to within a few lines of the bifurcation of the innominate.

Case of H. C., æt. 45. The ligation was performed to arrest severe secondary hemorrhage, occurring on the thirteenth day after an operation for the removal of a

tumor involving the thyroid gland. The patient had an attack of erysipelas following this operation, and though for several days after the ligation he appeared to improve, symptoms of pyæmia developed themselves, and he died on the tenth day. The ligation was ready to separate, having ulcerated through the coats of the vessel.

Presented by Dr. T. G. MORTON.

1565.—Aneurism of Subclavian Artery.

The heart was large, pale, and softened. The arch of the aorta and all the vessels springing from it were dilated and had their coats thickened. The right subclavian, in its outer portion, is especially dilated, and presents two aneurisms, one less than an inch in diameter, and a second, separated by a narrow wall from this, oval in shape, and two and a half inches in its transverse by three and a half inches in its long diameter. The walls of the artery are very thick and dense, especially at the extremities of the aneurism. The sac contains a few small coagula. The axillary plexus of nerves is seen stretched and compressed by the tumor.

Case of a negro, æt. 55, admitted to the Pennsylvania Hospital June 13, 1862. Seven months previously he had noticed pain and partial loss of power in the right arm, and soon afterwards he found a tumor in that axilla. Two months before admission he detected, in the same way, a popliteal aneurism in the left leg. When first seen, there was a pulsating tumor behind and above the sternal end of the right clavicle. There was marked pulsation beneath the outer third of the clavicle, and a rounded tumor the size of a hen's egg in the axilla. There was a well-marked thrill above the clavicle. While in the hospital, an aneurism appeared on the right brachial artery. On August 12, 1862, the popliteal aneurism ruptured, the leg swelled enormously and became gangrenous up to the knee, and death occurred August 21, 1862.

1568.—Aneurism of Popliteal Artery, cured by Compression.

The sac is an oval one, about an inch in its transverse by an inch and a half in its long diameter. The walls are exceedingly thick and dense, and the inner surface of an almost pure, opaque, glistening white. There are also several patches of atheroma, and at the extremities of the sac corresponding to the original orifices of the artery are patches of calcareous deposit. The communication of the sac with the artery is entirely cut off, and it contained only a clear serous fluid. Above the sac the artery was obliterated for less than half an inch, to the origin of the next vessel; the collateral circulation had maintained the patulousness of the arteries below the sac, to within a half inch of it. The popliteal vein was very closely adherent to the wall of the tumor.

Case of a man who died in the Pennsylvania Hospital from delirium tremens. He had studied medicine in his youth, and, having detected the aneurism in his popliteal space, applied systematic digital pressure for a number of hours on several consecutive days, until all pulsation had ceased in the aneurism. The point selected for pressure was over the femoral artery, just where it dips into the adductor.

1570.—Atheroma of the Renal Artery and Granular Contraction of Kidney.

The specimen exhibits atheroma of the aorta at the origin of the right renal artery, partially occluding that vessel. The main branches of the renal artery are also somewhat atheromatous. The right kidney is also seen with its external surface lobulated and granular, and, on section, presenting a diminution of its cortical portion.

Case of a man, *æt.* 68, admitted to the Pennsylvania Hospital with impairment of speech and hearing, slight hemiplegia, and involuntary discharges of feces and urine. The last symptom had existed about two weeks, but the others had gradually increased for some time past. He was also greatly emaciated. Coma supervened, and he died three days after admission. At the autopsy marked atheroma of the aorta was found, and also of both vertebral arteries, the basilar and all its ramifications. The brain-substance was extremely anæmic and slightly softened.

1571.—Calcification of Splenic Artery.

The specimen shows the splenic artery unusually large, and converted into a rigid tube with calcareous deposit within its walls. The same condition extended into its branches.

Case of a sailor, *æt.* 78, who died of phthisis. He had been very intemperate. At the autopsy the aorta was found covered with calcareous scales, the brachial arteries were studded with similar patches, and the radial and ulnar arteries were in parts quite rigid.

Presented by Dr. A. D. HALL.

1572.—Femoral Vein, showing Gunshot Wound.

The specimen shows two large openings in the femoral vein, involving about one-third the circumference of its walls, and separated from each other by a narrow band. The artery is seen intact.

Case of a young man, *æt.* 21, admitted to the Pennsylvania Hospital, having been shot by a musket-ball just below the groin. When admitted, he was nearly exsanguine, and died four hours after the injury. The ball had splintered the ischium, and lodged directly behind the descending ramus.

Presented by Dr. T. G. MORTON.

1573.—Epithelioma of Leg, involving Saphena Vein.

The tumor is almost hemispherical in shape, and about an inch and a half in diameter. Its external surface presents in places marked vascularity, and in places superficial ulceration. On section, it is found to possess a fibrous structure and slightly granular appearance. It arises from the skin of the leg by a broad base, and has a rounded, mushroom-like edge.

Case of Richard Thomas, *æt.* 68, admitted to the Pennsylvania Hospital August 27, 1861. He attributed the growth of the tumor to the bite of an insect which had become irritated by the rubbing of his boot. It had been growing for about two years. It was situated in the course of the internal saphena vein, and was somewhat

movable; but, when removed by Dr. Hewson, was found to be so connected with the saphena vein, that this vessel had to be tied above and below the mass. The patient died of pyæmia nine days subsequently.

1576.—**Scrofulous Cervical Glands.**

The specimen shows the entire chain of cervical lymphatics, which are enlarged to sizes varying from half an inch to an inch and a half in diameter, and present, on section, masses of cheesy material.

Case of a man, æt. 40, admitted to the Pennsylvania Hospital with fibrous tumor of the nape of the neck. (See Spec. 1249.) The glands were removed from the left side by Dr. Pancoast, and extended so deeply that, when removing the mass, the subclavian artery was exposed. The patient lost much blood, but made a rapid recovery. The glands had been previously divided subcutaneously, but without good result.

1577.—**Scrofulous Cervical Glands.**

The specimen shows two glands, enlarged to the extent of an inch and a half and two inches respectively. Externally, they are invested by a distinct capsule, and are slightly lobulated. On section, the fibrous trabeculae appear enlarged in places, and the gland-tissue is converted into a firm, or, in places, cheesy, yellowish material.

From the right side of the neck of the same patient who furnished the above specimen.

1578.—**Tuberculous Lumbar Glands.**

The chain of lumbar glands on either side of the spinal column are much enlarged, varying in size from a third of an inch to an inch and a half in length, firm, and, on section, present numerous isolated deposits of yellowish tubercle in the firm, reddish-gray, glandular substance.

Case of Annie Belmont, who died with abdominal tuberculosis. (See Spec. 1602.) She was treated for phthisis in the Pennsylvania Hospital one year previously, and improved so much as to enable her to return to her work. Nine weeks before her death she was seized with symptoms of fresh pulmonary deposit, and soon afterwards her abdomen became sensitive to pressure below the line of the umbilicus, and she complained of pain on micturition; the belly was also tympanitic. At the autopsy the lungs were found packed with firm, grayish-yellow tubercle, and there were firm pleuritic adhesions throughout both sides. The bronchial glands were much enlarged. Both the parietal and intestinal layers of the peritoneum were the seat of abundant tuberculous deposits, which varied in form from pearly granulations the size of a pea to large cheesy masses. The head of the pancreas, pylorus, duodenum, and vessels connected with the transverse fissure of the liver were matted together into a resisting mass by the intervention of this deposit. The great omentum was adherent to the fundus of the uterus, and its layers enormously thickened with tuberculous matter. The right kidney, both ovaries (see Spec. 1691), and the mesenteric and meso-colic glands were all tuberculous. The intestines were greatly distended with flatus, and presented tuberculous ulceration of their mucous membrane.

1579.—Mesenteric Glands in Typhoid Fever.

The specimen exhibits a chain of mesenteric glands which vary in size from half an inch to an inch and a half in length, and, on section, were slightly softened, and of a quite deep red color. The largest glands correspond to the lower extremity of the ileum. In no instance did the glands present any central suppuration.

Case of George Wright, who died in the Pennsylvania Hospital, about the twelfth day, of typhoid fever. (See Spec. 1338, 1338^b, 1338¹⁰.)

1580.—Cancer of Cervical Glands (Cast).

Case of Catharine Patton, æt. 10, admitted to the Pennsylvania Hospital December 29, 1865, with a tumor growing on the left side of the neck. The mass was spheroidal in shape, two-thirds the size of the child's head, and pressed strongly upon the larynx and œsophagus. The skin over it was tense, discolored, and adherent, with large tortuous vessels; at one point ulceration had occurred, with occasional hemorrhage. Death soon followed (February 20, 1866), from exhaustion and obstruction to respiration. The disease involved the cervical lymphatics, and also extended into the thorax, implicating the post-sternal and bronchial glands.

GENITO-URINARY SYSTEM.

1583.—**Right Kidney found in Anomalous Position.**

The kidney was removed from the pelvis, just below the rim. It is supplied by two arteries which arise from the aorta, just before its bifurcation into the primitive ilia. The general outline of the kidney is circular; its posterior surface is flat and disk-like, and presents numerous small depressions, caused by the rupture of minute cysts. Anteriorly the two arteries diverge, and enter the hilum on either side of a central abnormal pelvis. The circumference of the organ is broken by the two arteries, so that, when viewed from in front, it seems as though there was a kidney-shaped mass with an artery entering each extremity, while a cushion-like portion is seen surmounting this, between the arteries. The hilum has the form of a broad, obtuse-angled triangle. The pelvis is irregular in shape, and has prolongations going to different parts of the organ. Some small cysts are also seen on the anterior surface. The ureters were double, and entered the bladder at the usual place. There was no other kidney present.

Case of a patient who died in the Pennsylvania Hospital from mania-à-potu.

Presented by Dr. H. L. Hodge.

1584.—**Kidney, showing Anomaly in Size.**

The specimen shows a kidney extremely shrivelled, and so much atrophied as to measure little more than an inch and a quarter in length, three-quarters of an inch in breadth, and one-sixth of an inch in thickness. Its surface is granular and irregular. The ureter is small, but normal in position. The renal structure is said to have been tubular. The right kidney was much enlarged.

Case of a man who died in the Pennsylvania Hospital from fracture of the skull.

1585.—**Fused Kidney.**

The kidneys are quite normal in size and structure, except that their pelves are directed more anteriorly than usual, and their lower extremities are connected by a ribbon-like band nearly an inch wide, which passed across the vertebral column.

Case of a patient who died in the Pennsylvania Hospital.

1586.—**Fused Kidney (Cast).**

The two kidneys are merged into one, which was placed near the third lumbar vertebra, and so situated that about four-fifths of the organ were on the left side of the spine. The part which lapped over the spine was much thinner than the main body. The entire organ has an irregular

kidney shape. On the posterior surface the parenchyma is deficient in two places, thus forming two hila. The left one, which is connected with the main body of the gland, is an inch and a quarter long by three-quarters of an inch broad. The right hilum is nearly three times as large as this, of an irregular quadrilateral shape, and much more superficial than the left. The pelves of the kidneys are contained in these cavities, and do not communicate with each other. A single artery supplied the organ, sending two branches to the left and one to the right portion. The gland measures six inches and three-quarters in length by four inches and a quarter in breadth, and weighed nine ounces and a half. Its consistence was quite healthy. The left ureter was twelve inches and a half long; the right, ten inches.

Presented by Dr. T. G. MORTON.

1587.—Suppuration of the Kidney.

The kidney is very much enlarged, measuring seven inches and a half in length, and weighing fifteen ounces. The external surface is in numerous places eroded, and presents irregular, shallow cavities. On section, large abscesses were found, with ragged walls. Its ureter was of normal size.

Case of a young girl who died in the Pennsylvania Hospital five months after admission. She had had gonorrhœa, and the inflammation had probably extended up to the kidney. In the third month after admission she discharged pus from her bladder. She ultimately died from exhaustion. At the autopsy the right kidney was of the usual size, but much congested, while the left was in the condition above described.

Presented by Dr. A. D. HALL.

1590.—Kidney, showing Cyst.

At one extremity of the organ a cyst with very thin walls is seen projecting above the surface of the organ, forming an oval prominence about an inch and a quarter by three-quarters of an inch in size.

No history.

1591.—Kidney, showing Cystic Disease.

The ureter and pelvis do not appear enlarged. The capsule of the kidney was unnaturally adherent to the surrounding parts. On section, the secreting structure of the gland is seen to be entirely destroyed, and the organ is converted into a series of thin-walled pouches, separated from each other by fibrous septa of varying thickness. The inner surface of most of these is smooth and serous-looking, but in some it is rough and granular.

Case of a patient in the Pennsylvania Hospital. No history.

1592.—Kidney, showing Cystic Disease from Dilatation.

The walls of the ureter are thin, and it is so dilated as to measure half an inch in diameter. The pelvis is also much enlarged, and this distension continues upwards into the calyces, which form a series of smooth-walled pouches, and have so encroached upon the secreting structure of the kidney

as to have reduced it to a layer of cortical portion less than an inch in thickness.

Case of a man, æt. 45, who died in the Pennsylvania Hospital after having suffered from stricture of the urethra.

1594.—Kidney, showing a small Calculus imbedded in a Cyst.

The kidney is in a state of granular degeneration. It presents a cystic cavity towards the pelvis, which seems like a distended calyx, and contains a calculus about the size of a large pea. There were also numerous smaller ones.

Case of a man, æt. 42, who died in the Pennsylvania Hospital. He had had albuminuria, and appeared relieved; but about two months before his death all the symptoms recurred, and finally hydrothorax set in.

Presented by Dr. T. G. MORTON.

1596.—Kidney, showing Granular Degeneration.

The organs are flattened, and reduced in size. The external surface is covered with minute granulations.

Case of a man who died in the Pennsylvania Hospital, having presented symptoms of Bright's disease for some time.

1597.—Kidney, showing Granular Degeneration.

The kidney is reduced to about half its normal size. The cortical portion is atrophied, dense, and granular, and the capsule thickened and too adherent. The specimen has been partially injected with Prussian blue.

The patient from whom the specimen was obtained died dropsical and uræmic.

1600.—Kidney, showing Chronic Tubular Nephritis.

The specimen shows the so-called large white kidney of Bright. The gland is much enlarged; its outer surface, for the most part, smooth and rounded, though there are in places minute, shallow depressions. On section, the tissue is seen to be pale and whitish, the cortex presenting a quite homogeneous appearance.

From a case in the Pennsylvania Hospital. No history.

1601.—Kidney, showing Tuberculous Deposit.

The external surface of the kidney is irregular and nodulated, from the deposit of tubercle in its cortical substance; some of the prominences thus caused being more than an inch in length. Upon section, the secreting structure of the organ is seen to be irregularly destroyed by the softening and discharge of the tuberculous matter, which has caused numerous abscesses, of sizes varying from that of a pea to three-quarters of an inch in diameter. Some of these are seated in the medullary portion, while others involve the cortical substance almost through its entire thickness. In some places the walls are formed of dense fibrous tissue, while in others they are

rough and nodular, and composed of still firm tuberculous matter. The walls of the ureter, in its upper part, are thickened.

No history.

Presented by Dr. T. G. MORTON.

1602.—Kidney, showing several isolated Deposits of Tubercle.

The tubercle is imbedded in the structure or projecting under the capsule. In places it is crude and cheesy, in others it has softened and been partially discharged. No examination of the urine is recorded.

The lungs contained much softening tubercle. There was also marked tuberculous peritonitis, almost limited to the lower segment of the abdomen, matting together the pelvic viscera, between which several false passages existed. The intestines presented tuberculous ulceration, and the lumbar glands were enlarged and contained tubercle. (See Spec. 1578.)

Case of Annie Belmont, æt. 20, admitted to the Pennsylvania Hospital October 29, 1866, with evidences of pulmonary tubercle, chronic intractable diarrhœa, soreness of the hypogastric region, and occasional dysuria.

1604.—Kidney, showing Cancer.

The organ is somewhat enlarged, and, both externally and on section, its tissue is seen to contain numerous small nodules of firm cancer. Few of these nodules are larger than a pea, and are found alike in the tubular portion and in the cortical portion, projecting slightly above the surface.

Case of a man, æt. 60, who died in the Pennsylvania Hospital from cancer of the prostate gland. (See Spec. 1665.)

Presented by Dr. T. G. MORTON.

1605.—Kidney, showing Cancer.

The organ is not materially enlarged. Its external surface is slightly nodulated, from the deposit of a great many small nodules of firm cancerous matter in the outer layer of the cortical portion. On section, none of these deposits were seen in the pyramids. The capsule of the kidney was not materially thickened. The cancerous nature of the nodules was confirmed by microscopic examination.

Case of a soldier, æt. 50, who died in the Pennsylvania Hospital. He was extremely emaciated, and was accustomed to discharge very large quantities of limpid urine of a specific gravity varying from 1001 to 1005.

1607.—Kidneys and Bladder, showing effects of Calculous Pyelitis.

The disease is on the left side. The kidney is large; its secreting structure somewhat diminished, from distension of the pelvis. The surface of the pelvis is coated with a rough layer of grayish-yellow lymph. The ureter is much enlarged. On the right side there is also some thinning of the kidney-structure, from distension of the pelvis, which, however, shows comparatively slight signs of inflammation. The ureter is but slightly enlarged. The walls of the bladder are much thickened, and the rugæ of its mucous membrane are hypertrophied.

1608.—Kidney, showing Enlarged Pelvis.

The gland has not been opened, but externally presents no signs of disease. The ureter is of normal calibre, but at the beginning of the pelvis it becomes suddenly dilated, so as to form, when distended, an ovoid pouch two inches long by one inch in diameter, projecting from the hilum of the kidney. The distension has not been uniform, as the ureter enters one side of the pelvis.

Case of a man who died in the Pennsylvania Hospital from mania-à-potu.

1609.—Kidney, showing Dilatation of its Pelvis, with Absorption of Secreting Structure.

The ureter and pelvis are exceedingly dilated, with thinning of their walls. This distension involved also the calyces, and the secreting structure of the organ is reduced to a thin layer. The mucous membrane covering these cyst-like pouches was encrusted with phosphates.

Case of a man, æt. 46, who died in the Pennsylvania Hospital from the effects of urethral stricture.

1611.—Kidney, showing Cystic Dilatation from Impaction of Calculi in Pelvis.

The organ is large, and, on section, shows marked dilatation of its pelvis and many of its calyces, so as to form a series of cyst-like pouches, with extreme thinning of the secreting structure around them. There is, apparently, but a single calyx which has not undergone this distension. The pelvis is entirely blocked up by two large calculi, which are moulded to its surface; and from these large stones four smaller prolongations, with button-like heads, run up into the dilated calyces, which also contain a large amount of phosphatic stones of small size.

Case of a man who had had several attacks of gravel, and at times had passed as much as a tablespoonful of phosphatic fragments. At the autopsy an enormous abscess involving the posterior part of the liver was found, besides very numerous smaller ones thickly scattered throughout the organ.

Presented by Dr. T. G. MORTON.

1612.—Kidney, showing Imbedded Calculi.

The entire kidney appears atrophied, and the pelvis and calyces are distended so as to form a series of cyst-like pouches. The secreting structure is reduced, save at one place, to a very thin layer, not exceeding in parts a line and a half in thickness. There is a large, rough, irregular calculus imbedded in the pelvis, and a smaller, stellate one in one of the dilated calyces. These calculi are principally phosphatic.

Case of a patient who died in the Pennsylvania Hospital. No history.

Presented by Dr. T. G. MORTON.

1613.—Renal Calculi.

The specimen exhibits four small oval calculi, found imbedded in the kidney in a case of Bright's disease.

No history.

1613^s.—Renal Calculi.

The specimen exhibits eight calculi, of sizes varying from a line to half an inch in diameter, which were found imbedded in the kidney in a case of Bright's disease.

No history.

1614.—Chronic Perinephritis, with Dilatation of the Calyces of the Kidney.

The capsule of the kidney is very dense, tightly adherent, and in places forms, with the condensed fat and connective tissue, a firm layer a third of an inch thick. The vessels at the hilum, and the pelvis are imbedded in dense fibrous tissue. The calyces of the kidney are very much dilated, causing great thinning out of the cortical structure, especially near the upper end.

Case of a man who died in the Episcopal Hospital, having long suffered with chronic cystitis.

1616.—Diabetic Sugar Clarified.

The specimen exhibits the sugar in a granulated form, of a light grayish-white color.

Case of a man, æt. 38, admitted to the Pennsylvania Hospital with ordinary diabetic symptoms, passing eight pints of urine daily, of a specific gravity of 1038°. He died with symptoms of effusion on the brain and ascites. At the autopsy the abdominal fluid was found to contain sugar in great amount. None could be detected in the brain, or in the blood of the ascending cava.

Presented by Dr. T. G. MORTON.

1620.—Urinary Calculus from a Deer.

The calculus is oval, about an inch in length, and of smooth external surface.

Composition: Phosphate of lime and phosphate of soda.

Nucleus: A pebble of silica.

Presented by Dr. T. G. MORTON.

1620^s.—Urinary Calculus from Bladder of a Deer.

The stone has a smooth external surface, and is in shape a flattened oval, about an inch and a quarter in length by one inch in width. It presents, on section, numerous concentric layers.

Composition: Phosphate of lime, phosphate of soda, carbonate of lime, and magnesia.

Presented by Dr. T. G. MORTON.

1623.—Urinary Calculus.

The stone is oval, about two inches in length by an inch and a half in its transverse diameter. Its external surface is whitish, granular, and porous. On section, it presents a more dense nucleus, with surrounding porous structures. The outer part shows the most marked lamination.

Composition: Phosphatic.

This stone was found in the bladder of a patient after death.

Presented by Dr. E. HARTSHORNE.

1624.—Urinary Calculus.

The calculus is oval, about an inch and a third in its long diameter by an inch in its transverse. Its external surface is rough, and grayish-brown in color. On section, it appears dense, with distinct concentric laminæ, chiefly white, but with slate-colored nucleus. There is also a considerable amount of fragments, which are evidently portions of outer laminæ which had previously coated the main calculus.

Composition: Phosphatic.

Case of a patient in the Pennsylvania Hospital from whom the calculus was removed by the lateral operation, by Dr. E. Hartshorne. Death occurred one week subsequently.

1626.—Urinary Calculi.

The specimen exhibits two calculi: one small, dark brown, oval in shape, with rough, mulberry-like exterior; the other larger, irregularly L-shaped, lighter in color, with slightly granular exterior surface.

Composition: Uric acid, urate of soda, urate of lime, and carbonate of lime.

No history.

Presented by Dr. T. G. MORRIS.

1628.—Urinary Calculus.

The specimen shows about half an ounce of small fragments of a firm grayish-white calculus.

Case of a boy, æt. 17, admitted to the Pennsylvania Hospital with paraplegia, resulting from fracture of the vertebræ from a fall. The stone in his bladder was crushed several times, and finally was entirely discharged.

1630.—Urinary Calculus.

The specimen shows a small, smooth, oval stone, about half an inch long, of fawn color, presenting numerous concentric laminæ on section.

Composition: Uric acid.

Case of George Hart, æt. 6, who died of hydrothorax following scarlatina. He had had trouble in passing water, and sediment had been observed in the urine.

Presented by Dr. C. C. LEE.

1632.—Urinary Calculus.

The specimen shows a small stone, of grayish-white color, resembling a

wheat grain in shape, and about a third of an inch long. There are also a few small, loose fragments. It was passed by a child four years old.

Composition : Uric acid.

Presented by Dr. T. G. MORTON.

1634.—Urinary Calculus.

The specimen shows a number of irregular fragments, weighing ninety-two grains, of grayish or brownish color, most of them fragments of oval laminæ.

This calculus was extracted at the Pennsylvania Hospital, March 1, 1834, by Dr. Hewson, from a patient named Peter Spears.

Presented by Dr. MITCHELL.

1640.—Urinary Bladder, showing Hernial Dilatation.

The muscular walls of the bladder are much hypertrophied, and its cavity quite small. At the upper and posterior part of the right side is a round opening three-quarters of an inch in diameter, leading into a hernial dilatation as large as the bladder itself, two inches and a half in diameter. The walls of this dilatation are very thin, consisting merely of mucous membrane and thickened peritoneum. The ureters were much dilated. The urethra presented a dilatable stricture.

Case of a man, æt. 60, admitted to the Pennsylvania Hospital. He had suffered with stricture of the urethra for more than twenty years; had constant desire to urinate, and was in the habit of straining violently, so much so as to cause prolapse of the rectum and extravasation of urine into the cellular tissue of the scrotum.

Presented by Dr. H. L. HODGE.

1641.—Urinary Bladder, showing Incrustation of Phosphates.

The specimen shows the bladder inverted, and incrustated throughout with a thick grayish layer of phosphatic salts, much resembling a layer of false membrane. The walls of the bladder are also much hypertrophied.

Case of a colored man who died in the Pennsylvania Hospital from sloughing of the penis and scrotum, consequent upon forced catheterization.

1644.—Urinary Bladder, after Lithotomy.

The walls of the bladder are very much hypertrophied, and its cavity contracted. The mucous membrane presents a number of button-like prominences, with honeycombed, minutely reticulated surfaces. The rest of the mucous membrane seems comparatively healthy, save on the right side of the anterior surface, where the calculus was adherent and partially encysted. Here the mucous membrane is deeply ulcerated, and there are several fistulous openings which lead out through the wall into a mass of organized lymph which bound the exterior of the bladder to the posterior surface of the pubic bone. The incision through the prostate is seen as a triangular opening.

Case of a man, æt. 58, admitted to the Pennsylvania Hospital February 6, 1861, from whom a large calculus (see Spec. 1624) was removed by lateral lithotomy, by

Dr. E. Hartshorne. Prior to the operation, he had suffered from very great irritability of the bladder, and afterwards the symptoms of cystitis became more marked, and he died one week after the operation.

1645.—Urinary Bladder, showing Rupture.

The rent is about an inch long, and gapes very widely. It only involves, however, the mucous and muscular coats, the peritoneal investment not being ruptured.

No history.

1646.—Urinary Bladder, showing Rupture.

The rupture is near the fundus, and is about three-quarters of an inch long.

Case of Mary Stephenson, æt. 38, admitted to the Pennsylvania Hospital September 20, 1866, in a state of partial collapse, with the history of having fallen from a second-story window. She vomited frequently. Her respirations were short and labored, and her pulse was small and thready. Her abdomen was sensitive, bruised, and ecchymosed; the urine was retained, and when the catheter was used, the nurse thinks it was not bloody. Death followed in eighteen hours, and at the autopsy there was acute peritonitis, the peritoneal cavity containing bloody serum mixed with urine and fecal matter. The jejunum was also ruptured. (See Spec. 1351.)

1647.—Urinary Bladder of a Dog, showing Rupture.

The mucous membrane of the bladder appears discolored, as though ecchymosed in places. The rent is about a quarter of an inch in diameter, and is on the posterior surface, just below the prostate gland. The urethra had become filled with calculi, which completely prevented the discharge of urine. The bladder finally ruptured, and the dog died of peritonitis.

Presented by Dr. A. H. SMITH. (See Spec. 1669.)

1650.—Testicle, showing Chronic Orchitis, with Abscess.

The scrotum and investments of the testicle are enormously thickened, and so dense as to be almost cartilaginous. In the centre was found an abscess, the cavity of which was filled with a mass of cheesy lymph. There were several smaller abscesses, which communicated with the exterior. The vas deferens had become obliterated.

Case of a man, æt. 58, who had suffered pain in the testicle for twelve years. When first seen by the donor, an abscess had formed, and discharged externally in two places. The testicle was much enlarged, painful, very hard, and there were two fistulous openings in the scrotum which discharged thin pus. As it was a source of great annoyance, it was removed by the écraseur, and the patient made a good recovery.

Presented by Dr. T. G. MORTON.

1651.—Testicle, showing Chronic Orchitis, with Abscess.

The testicle is enlarged, and its investments are much thickened and indurated. The cavity of the tunica vaginalis is to a great extent obliterated,

but there seems to have been no discharge externally from the scrotum. Upon section, the testicle presents a large mass of grayish-yellow material, part of which has undergone complete softening, and given rise to a small abscess with irregular walls. The rest of the deposit projects above the surface of the section, and is evidently due to the infiltration of the gland-tissue by cheesy lymph. There is a similar but much smaller deposit at a short distance from this.

Case of a patient in the Pennsylvania Hospital. No history.

1652.—Testicle, showing Cystic Sarcocoele, with Hydrocele.

The gland is enormously enlarged, and very dense. Its external surface is white and smooth. On section, it presents an infinite number of fibrous trabeculæ, which pass in curving and intersecting bands, forming small cyst-like cavities, which are filled with a firm, grayish-yellow, sarcomatous tissue. These cavities vary from an almost imperceptible point to half an inch in size. The epididymis is also involved, and there was also a large hydrocele.

Case of a man, æt. 40, who was admitted to the Pennsylvania Hospital with a large tumor in the right groin. He had an undescended testicle, and four months before admission he injured himself over the region where it was supposed to be, when it began to swell, without causing him much pain until it attained the size shown in the specimen, when great œdema of the right leg ensued from pressure. A large elastic, semi-fluctuating mass was found in the right inguinal region, and was removed by Dr. Hewson. The larger part of the tumor was formed by the hydrocele which was covered by the tendon of the external oblique. The patient died of erysipelas on the seventh day.

1652⁵.—Cast of the above Specimen, showing the large Spheroidal Tumor in the Right Groin.

Presented by Dr. A. Hewson.

1654.—Testicle, showing Chronic Orchitis (Strumous Sarcocoele).

The gland is much enlarged, and its investments are thickened and blended with the scrotum, which is itself infiltrated with lymph. On making a section, the gland is seen infiltrated with a grayish-yellow deposit, which has softened over quite a large space, and discharged by several fistulous tracks through the scrotum.

Case of a negro, æt. 60, admitted to the Pennsylvania Hospital, who had noticed that his testicle was swelling for four months previously. Abscesses had formed in it, and discharged in several places. The gland was removed, and the wound healed nicely; but after several years the man re-entered the hospital with phthisis, from which he died.

1655.—Testicle, showing Cystic Disease.

The gland is at least three inches in diameter, firm, and nodulated externally. Upon section, it is found to have undergone complete cystic

degeneration. Some of the cysts are half an inch in length, while others are as small as the pores of a fine sponge; though most of them are about one or two lines in diameter. In some places they are separated by fibrous partitions two lines wide, but in others the cyst-walls are very thin and delicate. The contents of these cysts were entirely fluid, and in no instance is any sarcomatous growth seen springing into their cavity.

Case of a married man, æt. 34, admitted to the Pennsylvania Hospital, who had noticed, three months previously, a small hard lump in the lower part of the right testicle. This continued to enlarge, without pain, until, when admitted, it had attained the size of an orange. It was a source of great inconvenience, and was successfully removed.

1656.—Testicle, showing Medullary Cancer.

The gland is enormously enlarged, measuring almost five inches in length. Its external surface was bosselated, and in places showed marked vascularity. There are also one or two superficial ulcerations. On section, the gland presents numerous fibrous trabeculæ traversing its structure, and supporting firm, highly vascular, medullary cancer, some of the large vessels of which can be seen.

Removed from a patient in the Pennsylvania Hospital, by Dr. Hewson. The écraseur was employed, and the wound healed well, but the disease returned in a few months.

1658.—Testicle, showing Hydrocele of the Cord.

The capsule of the testicle is much thickened, and there is a cyst just above it on the cord, about an inch in diameter, the inner surface of which presents calcareous deposit.

Case of a patient in the Pennsylvania Hospital. No history.

1659.—Testicle, showing Hydrocele of Tunica Vaginalis Testis.

The specimen shows the sac, which has thin, translucent walls, and is capable of holding about six ounces, distended with fluid.

1661.—Prostate Gland, enlarged, with False Passages.

The specimen shows the urinary bladder enormously dilated, though its walls are still rather thick. The prostate gland is extremely hypertrophied, all three of its lobes being involved. No less than five false passages are seen traversing its substance, and a whalebone is passed in the track of a trocar with which the bladder was tapped through the rectum.

Case of a man, æt. 76, who for fifteen years had suffered from urethral strictures and enlarged prostate, and had undergone repeated forced catheterization. His last attack of retention was unusually severe, and a catheter was passed forcibly into the bladder. The bladder refilled in a few hours, and Dr. Morton tapped it through the rectum. A canula was left in for three days, during which time he had perfect ease; but it then became obstructed, and was removed, when the bladder refilled, and, on forced catheterization being again resorted to, the patient sank and died.

Presented by Dr. T. G. MORTON.

1662.—Prostate Gland, showing Enlargement, with False Passage.

The lateral lobes of the prostate are enlarged, forming ovoid masses an inch and a half long. The enlargement, however, especially affects the middle lobe, which forms a projecting tumor almost an inch in diameter, completely obstructing the orifice of the urethra. A false passage is seen traversing the base of this lobe. The urinary bladder is contracted, its mucous membrane highly rugous, and its muscular coat greatly hypertrophied.

Case of a man, *æt.* 68, who was admitted to the Pennsylvania Hospital in a low typhoid condition, from which he did not rally.

Presented by Dr. H. L. HODGE.

1663.—Prostate Gland, showing Enlargement.

The lateral lobes are about one-half too large, and the middle lobe projects into the urethra, as a blunt pyramid, the base of which is tunnelled by three large false passages. The bladder is enlarged and thickened, and contained a large quantity of blood. The ureters were healthy; the kidneys lobulated, and their pelves dilated.

There was fatty degeneration of the heart, liver, &c. The cavity of the appendix vermiformis was obliterated, as the result of perforation. (See Spec. 1368.)

Case of an old man, *æt.* 70, who had suffered with difficulty in passing urine for some years, requiring occasional catheterism, and was admitted to the Pennsylvania Hospital December 1, 1866, with retention of urine. Several unsuccessful attempts had been made already to pass a catheter, and the man was very feeble and prostrate. A catheter was introduced and retained; bloody urine passed for several days, when death occurred from exhaustion.

1665.—Prostate Gland, showing Cancer.

The prostate gland and entire neck of the bladder are converted into a mass of firm encephaloid cancer. The urinary bladder is much enlarged, and its walls are thickened throughout almost its entire extent. The mucous membrane, towards the neck, presents a large number of closely-set villous prolongations, some of which are at least half an inch in length.

Case of a man, *æt.* 60, who had suffered for a long time with urinary trouble, attended with excruciating pain, and finally died from exhaustion.

Presented by Dr. T. G. MORTON.

1667.—Urethra, showing Strictures.

The urinary bladder is much enlarged, and its walls are thickened. The urethra runs in a straight course from the meatus for three inches and a half, and then comes to an abrupt termination; from this point a fistula communicated with the scrotum. About half an inch from the meatus a probe is seen introduced into a false passage which runs parallel to the urethra, and re-enters it at a point opposite the abrupt termination of its

anterior portion; at this point a calculus is imbedded, and several fistulæ diverge and open into the perineum.

Case of a colored man who died in the Pennsylvania Hospital from erysipelas of the head. He had had repeated attacks of gonorrhœa in his youth.

1669.—Urethra of a Dog, showing Impacted Calculi.

The urethra is laid open throughout its entire extent, and shows, about two inches from its anterior extremity, four round, white, cystine calculi, about the size of a buckshot, impacted tightly. There is a good deal of thickening of the walls of the urethra and surrounding tissue at this point. The obstruction caused a rupture of the urinary bladder, which was followed by fatal peritonitis. (See Spec. 1647.)

Presented by Dr. A. H. SMITH.

1671.—Urethra, showing Fistulæ.

The walls of the bladder are somewhat thickened. The urethra presents a stricture about an inch and a half in advance of the prostatic portion, and there are no less than three fistulæ, one of which is seated in the membranous portion, and directed backwards, opening at the posterior part of the perineum, while the others are seated in the prostatic portion, and open directly into the perineum.

Case of a patient in the Pennsylvania Hospital. No history.

1672.—Urethra, showing Rupture from Stricture.

The bladder is thickened, and presents signs of chronic cystitis. There is an impenetrable stricture of the urethra a short distance in front of the prostatic portion, and, just behind this, a rupture, the walls of which at the autopsy were in a gangrenous condition. Both ureters were dilated, and the kidneys sacculated. There was urinous infiltration of the penis and scrotum, extending as high as the umbilicus, and laterally as far as the crests of the ilia. There was no urine in the peritoneal cavity, and no peritonitis.

Case of a boy, æt. 11, who, six months before his admission into the Pennsylvania Hospital, fell across a fence and injured his perineum. Retention of urine followed, and was with difficulty relieved by the use of a catheter. Twenty-four hours before admission complete retention ensued, and, in straining, he ruptured the urethra. Urinous infiltration ensued, and the tissues became gangrenous. As it was impossible to pass a catheter, free incisions were made into the perineum, and urine escaped, but death occurred a few days subsequently.

1675.—Penis, showing Epithelioma.

The specimen shows a large ovoid epithelioma, involving two-thirds the circumference of the glans, and extending to the dorsum. The edges of the growth are slightly raised and everted, and its surface irregular, nodulated, and, in places, slightly shaggy.

Case of a man, æt. 60, admitted to the Pennsylvania Hospital. The duration of the disease was uncertain. The penis was amputated below the morbid growth, and the patient was discharged cured in fifty-five days.

1676.—Penis, showing Epithelioma.

The division involves the entire glans, and, having dissected loose the attachment of the skin, has extended two inches down the cavernous bodies of the penis. The glans is almost separated from its attachments, and the septum between the cavernous bodies is in part destroyed. The prepuce and skin of the penis are completely destroyed on the left side for two inches above the glans. On the right side, however, a bridge of skin, thickened and infiltrated, retains its connection with the penis. The entire diseased surface is covered with closely-set, small, soft nodules, like granulations.

Case of a patient in the Pennsylvania Hospital. Amputation was performed below the seat of disease, and the wound healed nicely.

1677.—Penis, showing Carcinoma.

Almost the entire organ was enlarged, and extremely indurated. At least one-half the glans was destroyed by an ulcer, which, beginning at the corona, had involved its substance deeply. On making a section of the organ, the entire tissue was found infiltrated by a firm cancerous growth.

Case of a laboring man, *æt.* 60, a patient in the Pennsylvania Hospital. He had noticed hardening of the penis and pain about the corona glandis for nearly two years. Ulceration had begun five months before, and rapidly advanced. The organ was removed, half an inch from the pubis, by the *écraseur*, the operation requiring ten minutes, and the patient was discharged cured two months subsequently.

1678.—Cast of Penis, showing Warts on Glans.

The entire dorsum of the glans is seen to be covered with an abundant growth of condylomatous warts.

Case of a patient in the Pennsylvania Hospital. The warts were successfully removed by ligature.

Presented by Dr. T. G. MORRIS.

1678^b.—Cast of Penis, showing Wart upon Glans.

The cast exhibits a large mulberry-like wart seated on the dorsal surface of the corona glandis.

Presented by Dr. T. G. MORRIS.

1680.—Penis removed by Self-Amputation.

The specimen exhibits the entire penis and most of the skin of the scrotum of a man *æt.* 59, who, in an attack of *mania-à-potu*, cut off his penis close to the pubis. He recovered after a very long illness, and when discharged from the Pennsylvania Hospital there was merely a small oval projection just below the pubis, in the middle of which a small orifice was visible, through which he passed his water. The remains of the scrotum have contracted and cicatrized, forming a corrugated conical covering for the testicles.

Presented by Dr. T. G. MORRIS.

1680^c.—Cast, showing Condition of Parts after Recovery in above Case.

Presented by Dr. T. G. MORRIS.

FEMALE GENITAL ORGANS.

1685.—**Osseous Tumor of Ovary.**

The specimen shows an ovoid mass about two inches and a half in diameter, with slightly irregular external surface. Upon being sawed open, it is found to be throughout calcareous. There is, however, no true osseous tissue present. The tumor is composed of one ovary.

Dissecting-room specimen.

Presented by Dr. T. G. MORTON.

1687.—**Ovary, showing Cystic Disease.**

The cyst, which springs from the left ovary, is globular in shape, and about six inches in diameter. It is a single cyst, with thin walls, which were so tightly adherent to the surrounding parts that they have been torn in several places in removing it. Its inner surface is rough and corrugated, and, when first removed, presented patches of yellow, brown, and black. It springs from the postero-inferior surface of the ovary, but tended to the right, and had its firmest attachments in the right ilio-lumbar region, so that more than half of it was on the right of the median line. The uterus and right ovary were healthy. There were strong and very thick adhesions, which bound the cyst, the abdominal walls, and the entire mass of small intestines very tightly together.

Case of Hannah Peebles, æt. 34, weaver, admitted to the Pennsylvania Hospital May 8, 1865. She had suffered for eight years from ovarian dropsy, with irregular attacks of pain and febrile symptoms, and gradual increase in the size of the tumor. An operation for the removal of the cyst was begun by Dr. Hewson, July 20, 1865, by an incision three and a half inches long in the median line. Dissection proved the cyst and abdominal walls to be so firmly and continuously adherent, that extirpation was abandoned and the cyst left open. During the operation a large amount of serum and dark, grumous, semi-solid lymph was evacuated. Numerous injections of various fluids were introduced into the cyst, but the patient steadily sank from subacute peritonitis and recurring suppurative inflammation among the old adhesions of the tumor, and died August 14, 1865.

1688.—**Ovary, showing Cystic Disease.**

The specimen shows a tumor springing from the posterior surface of the right ovary. It is about three inches in diameter, spheroidal, smooth externally, and, on section, is seen to consist of a large parent cyst with thick fibrous walls, into the cavity of which two secondary cysts project. One of these is more than an inch in diameter, spherical, with thick, dense, fibrous walls; the other is about half an inch in diameter, and has quite thin walls. The inner surface of both the parent and the large secondary cyst is much corrugated. The cysts were filled with a soft, yellowish matter.

Case of a patient in the Pennsylvania Hospital. No history.

1689.—Large Unilocular Ovarian Cyst, Stuffed and Dried.

The tumor is developed from the left ovary, the under portion of which is converted into an unilocular cyst, measuring thirty-five inches in the circumference of its long diameter, and thirty inches in that of its short or transverse diameter, with moderately thick fibrous walls, lined by epithelium, and which contained several gallons of ropy, viscid, variously-colored fluid. The remainder of the ovary was seen on the upper surface of the cyst, and presented incipient cystic disease. There were strong adhesions between the cyst and abdominal wall and intestines, and a broad band of organized lymph is preserved, passing from the anterior part of the tumor to the fundus of the urinary bladder, dragging upon this viscus. The uterus, right ovary, and other viscera were quite healthy.

Case of Alice Marland, æt. 21, admitted to the Pennsylvania Hospital December 13, 1866. The patient was married, but had never borne children. The tumor appeared several years previously, and had been already tapped eight times. There had been numerous attacks of subacute peritonitis. On admission, she was much exhausted, and colliquative diarrhoea set in, though the size of the tumor rapidly increased, and she died January 10, 1867.

1691.—Section of Multilocular Ovarian Cyst.

The external surface of the tumor is rough and shaggy, from numerous adhesions, and is also tightly adherent to the posterior surface of the uterus, which seems quite healthy. The inner surface of the section presents nine or ten pouches, varying in size from an inch and a half to three inches in diameter, the partitions being formed of dense fibrous tissue. The contents of these pouches are quite varied. In several of them are seen papillary glandular growths, which are attached to the cyst-wall by delicate pedicles or more broad bases, and terminate in one or more little bulbous heads, or in some cases form small masses like cocks' combs or portions of cauliflower. The masses which have broad bases are more compact and flat, only partially filling the secondary cysts in which they have grown; while the more delicate, pediculated growths completely fill two of the pouches. The two forms are, however, conjoined in the same cyst in several instances. One of the pouches is filled with a ball of whitish sebaceous matter, imbedded in which are numerous thin, light-colored hairs. And finally, there is an oblong piece of bone, much resembling a tooth in form, inserted into the partition wall of the cyst above this one.

History unknown.

1692.—Section of the same Multilocular Ovarian Cyst from which the above Specimen was obtained.

The external surface is quite smooth. The true wall of the parent cyst at this part is not more than a line in thickness; but from its inner surface it sends off partitions, forming innumerable secondary cysts, varying in size from a merely visible opening to half an inch in diameter. The walls

of these secondary cysts are exceedingly delicate, and in many instances have collapsed, and hang as wavy filaments. Their contents were mainly a viscid, ropy fluid, and in no instance is any solid growth found in their cavities.

History unknown.

1898.—Pilliferous Ovarian Cyst, communicating with the Intestinal Canal.

Case of Bessie Coulton, æt. 52, Irish, by occupation a seamstress, admitted to the Pennsylvania Hospital March 11, 1867, and died April 27, 1867. No satisfactory history could be obtained of the development of the disease, which was a large tumor in the right side of the abdomen. For some days after admission she presented symptoms of intestinal obstruction, but for several weeks preceding death an uncontrollable, exhausting diarrhœa existed, and much hastened the fatal event. The tumor was rounded, quite firm, and seemed very closely attached to the abdominal walls.

On opening the abdominal cavity, marked evidences of old peritonitis were seen. The various folds of the small intestine were closely agglutinated to each other, and there was an appearance of a large, round, fluctuating tumor, eight inches in diameter, filling the right iliac region, and extending upwards towards the hypochondria and across beyond the median line. On examining this more carefully, it was found to be formed entirely by the agglutination of various parts of the viscera. A large portion of its walls, especially the upper and anterior parts, were formed by folds of small intestine; its posterior wall consisted of the mesentery, while inferiorly was the uterus, with the recto-uterine and vesico-uterine folds. The portions of the surface of these parts which entered into the formation of this cavity presented marked brown and blackish discoloration, as though from chronic inflammation and contact with putrid fluids. The small intestines especially presented this condition, and in several points there was deep ulceration of the inner coats of the bowel, so that only the discolored and softened peritoneum prevented the escape of their contents. In tracing the small intestine downwards, there were found quite numerous small round ulcerations, with excavated centres, many of which occupied parts of Peyer's patches; and upon reaching a point probably six or eight inches above the original seat of the ileo-cæcal valve, the ileum came to an abrupt end. About one-half of its wall continued onward for a short distance, forming part of the wall of the cavity above described, but the rest of it terminated in a rounded, discolored lip. There were no traces whatever to be found of the cæcum, appendix cæci, or the beginning of the ascending colon. The ill effects of the sloughing of this part of the intestine were partly counteracted by adhesions which had formed between the lower end of the ileum and the upper end of the colon, so that much of the fecal matter passed directly onwards through the bowel, though a portion escaped into the cavity of the peritoneum, circumscribed as above mentioned, which thus contained a large amount of yellowish fluid of a strong fecal odor.

It also contained, however, a true cyst, lying free in its cavity, of nearly equal size to itself, with thin walls, which were shaggy, presented numerous irregular openings, and were in an advanced state of gangrenous decomposition. The fluid fecal matter had of course found entrance into this gangrenous cyst; but on removing it, and emptying the fluid from it, it was found to contain also a large mass of brown hair,

matted together with sebaceous matter. After treatment with caustic potassa, the saponified fat was entirely removed by thorough washing, and the hair obtained clean. It formed a mass fully three inches and a half long and an inch and a half in thickness, the outer surface loose and curly, the hairs being long and interwoven, and in one part a distinct and close twist had been produced during the growth of the hair. Upon making a section of the ball, the inner hairs were seen to be densely felted together, and of a more reddish-brown shade. The hairs forming this mass had no longer any connection with the walls of the cyst. Microscopically examined, they proved to be human hairs, with perfectly developed shafts; their formerly attached ends, however, terminated in oval, bulbous enlargements, but did not present the appearances of perfect hair-bulbs.

The inner surface of the cyst still presented in places a thin layer of unctuous sebaceous matter, with quite numerous short and light-colored hairs springing from it. It was impossible to discover the original point of attachment of this cyst, though it had undoubtedly been developed from the right ovary. The uterus was healthy; the right Fallopian tube was readily found, and there was a hard, puckered nodule in the broad ligament and involved in the wall of the cavity, which was, in all probability, the atrophied right ovary. The left ovary presented a single barren serous cyst, about the size of a hen's egg.

There were two or three firm whitish nodules, about half an inch in diameter, attached to the outer surface of the small intestine, which presented the microscopic appearances of epitheliomata, having no true fibrous stroma, and showing numerous large nucleated cells and concentrically disposed cells. (See Spec. 1350.)

There were no similar deposits found elsewhere, the other organs presenting no marked departure from the healthy condition.

It will be observed that the discharge of the sloughing parts of intestine passed entirely unnoticed, although it is probable that it occurred soon after the symptoms of obstruction yielded. It was suggested, after the autopsy, that these symptoms were caused by the patient having swallowed the hair at different times, until it had so accumulated as to cause obstruction, and lead to ulceration and sloughing of the bowel. Apart, however, from the entire absence of any history of such a habit on her part, this idea is entirely refuted by the position of the hair-ball inside the cyst, the close felting and twisting of the hairs, the peculiar sebaceous matter in which they were imbedded, and, still more, by the hairs which were found attached to the cyst-wall. Deficient as the record is in careful ante-mortem examinations, the only explanation of the specimen appears to be that it is a single piliferous cyst of the right ovary, which, having been detached from its connection, had become gangrenous, involved the adjacent portions of intestine in destructive inflammation, and had itself been surrounded by a pseudo-cystic cavity formed by adherent viscera, into which the ileum freely poured its fecal contents.

1694.—Ovaries, showing Tuberculous Deposit.

The ovaries and Fallopian tubes are matted together by tuberculous adhesions, and there were also deposits of tubercle in the substance of the ovaries.

Case of Annie Belmont (see Spec. 1602), who died of tuberculosis of the lungs, kidney, and peritoneum.

1695.—Ovaries, showing Carcinoma.

Both ovaries are converted into large ovoid tumors. The right, which is the smaller, is about five inches long, with a white, nodulated exterior, and, on section, presents a dense fibroid stroma. On the left side there is a tumor of similar character, and about the same size, from the surface of which, however, project several quite large, thin-walled cysts. The uterus is apparently healthy.

Case of a German girl who died in the Pennsylvania Hospital. The tumors had been growing for years, and could be readily felt by external manipulation.

1696.—Ovary, showing Cystic Carcinoma.

The specimen presents an irregular tumor, almost as large as an adult head, composed of a series of large cysts. These cysts, which are nearly all single, have developed eccentrically from the ovary. In size they vary from one to four inches in diameter, and their walls vary in thickness from half a line to more than an inch. The contents of the thin-walled cysts were almost entirely fluid, though, here and there, small, broad-based, low patches of nodular tissue can be seen projecting into the cyst-cavity. In the thick-walled cysts, on the other hand, the thickness is, to a great extent, due to large rounded nodules which spring from the wall, and, as in the case of the largest cyst, half fill the cyst-cavity. The growth is tightly adherent to the uterus, but does not seem to involve its tissue.

No history.

Presented by Dr. WILSON.

1697.—Ovaries, showing Carcinoma?

Each of the ovaries is converted into a nodulated tumor about four inches long. These growths are composed of a series of small rounded or irregular tumors, which are bound together and invested by a common capsule. On section, they present a dense fibroid stroma. The uterus appears quite healthy.

Case of a patient in the Pennsylvania Hospital. No history.

1700.—Abscess in Recto-Uterine Pouch.

The uterus and ovaries appear healthy, but on the right side of the pouch, between the uterus and rectum, there is an abscess with thick walls, capable of holding more than half an ounce. The adjacent peritoneum was thickened and dark-colored.

Case of a woman, æt. 44, who died in the Pennsylvania Hospital of chronic diarrhœa.

1705.—Uterus, showing Complete Procidencia (Cast).

Presented by Dr. T. G. MORTON.

1706.—Uterus, showing Fibrous Tumors.

The cervix of the uterus is considerably elongated, and there is a large intra-mural fibroid tumor occupying the entire upper segment of the organ.

This tumor is oval in shape, its long diameter, which is the transverse one, being about seven inches. It is invested by the peritoneum and a thin layer of uterine tissue. Its structure consists of dense fibro-muscular tissue, presenting, on section, short, curving, whitish bands, with small intervening patches of flesh-colored tissue. At the left side of its upper surface is a pseudo-cyst rather more than an inch in diameter, with quite thick walls. There are eight smaller tumors on the posterior surface of the uterus, varying in size from a half inch to two inches in diameter.

Case of a young woman, æt. 22, who died in the Pennsylvania Hospital from the effect of a burn. She had always been healthy, and menstruated.

1707.—Uterus, showing Fibrous Tumor.

The ovaries and Fallopian tubes appear healthy, but there are two oval fibroid tumors, one of which is imbedded in the right side of the uterus, while the other projects from the left side, merely carrying the peritoneum and a thin layer of muscular tissue before it. These tumors are about two inches and a half in diameter, and present, on section, the usual structure of uterine fibroids.

Case of a patient in the Pennsylvania Hospital. No history.

1708.—Uterus, showing Pediculated Fibrous Tumor.

The ovaries and Fallopian tubes are healthy. There is an oval fibroid tumor, about two inches and a half long, and of dense structure, attached to the fundus of the uterus by a flattened pedicle about half an inch in width. On section, the tumor is seen to be invested merely by the peritoneum. There are also two small fibroid nodules projecting from the surface of the uterus.

No history.

1709.—Uterus, showing Fibroid Tumor.

The uterus is but slightly enlarged, and its cervix not elongated. Its cavity is laid open, and shows imbedded in the fundus immediately beneath the peritoneum, and projecting slightly above the surface, a small fibroid tumor about half an inch in diameter. There is also a small cyst, about half an inch in diameter, in the extremity of the left Fallopian tube.

Case of a young woman æt. 20.

1710.—Uterus, showing Fibroid Tumors.

The uterus is not materially enlarged or its cervix elongated. There is a small, oval, fibroid tumor, half an inch in length, imbedded in the anterior wall, near the os internum; and another very small one attached by a thin pedicle to the fundus. There are also two tumors, about an inch in diameter, which project on either side of the uterus, carrying before them the peritoneum and a layer of uterine tissue about one line thick.

Case of a patient in the Pennsylvania Hospital. No history.

1711.—Fibro-Cystic Tumor, discharged from the Uterus.

The specimen is about eight inches long, of very irregular form, and without any distinct pedicle. A portion of it is quite solid, and consists of the ordinary structure of fibroids of the uterus; but there are also many cavities of varying sizes, which do not present any true cyst-wall, and probably result from partial softening. A few flattened fibroid nodules hang from the outer surface.

Case of a woman admitted to the Pennsylvania Hospital, who had suffered several years with symptoms of fibroid tumor of the uterus. Some time before admission a large mass escaped into the vagina, partially protruding beyond the vulva, and soon became gangrenous. A ligature was passed around the tumor as it emerged from the os uteri, and the fetid mass cut off close below. No unpleasant symptoms followed, and the patient soon recovered.

1712.—Fibroid Tumors of Uterus, with Cystic Disease of Ovary.

There are four or five fibroid nodules, varying in size from that of a small pea to a hazelnut, projecting under the peritoneal investment of the superior segment of the uterus. The right ovary is healthy, but the left presents two cystic cavities about one inch in diameter.

1716.—Uterus, showing Carcinoma.

The ovaries and Fallopian tubes are healthy. There is a nodulated cancerous mass which has destroyed the entire cervix of the uterus, and involves the upper portion of the vagina. The cavity of the uterus is enlarged, and its walls are somewhat thickened, but the upper segment does not appear to be involved. The surface of the cancerous mass is in places granular or shaggy.

Case of a young woman, æt. 28, who died in the Pennsylvania Hospital.

1717.—Cancer of Uterus, springing from the Posterior Lip.

The cancer was removed by the *écraseur*, January 20, 1867. The part removed is two inches and a half by an inch and a half in diameter, and about three-quarters of an inch thick; and has a base for attachment to the posterior lip, three-quarters of an inch by an inch and a half in size. Its tissue is firm and fibrous, and the surface irregular, in parts resembling cauliflower growth.

Case of Sarah Betz, unmarried, æt. 26, admitted to the Pennsylvania Hospital with cancer of the os uteri. The diagnosis was confirmed by the microscope. After removal, the tissue of the cervix was found to be infiltrated, and the disease soon reappeared, involving all the pelvic viscera.

1720.—Uterus, with Ovaries and Vagina (normal).**1722.—Vesico-Vaginal Fistula.**

Case of M. S., æt. 38, admitted to the Pennsylvania Hospital February 13, 1866. The accident had happened with her fifth child, the delivery being instrumental.

The fistula was longitudinal, two inches and a half in length. This was closed by Dr. Agnew, fourteen silver stitches being inserted, and secured by shot clamps, and the patient did well for five days, all the urine passing by a catheter, when she sank into a typhoid, pyæmic state, and died on the tenth day. The adhesions between the margins of the fistula have given way, and the edges were coated with grayish, discolored lymph. There was no inflammation of the bladder or uterus.

Dr. D. HAYES AGNEW, *Memoir on Vesico-Vaginal Fistula*, Phila. 1867.

1726.—Labia, showing Syphilitic Ulcers.

There are two irregular, excavated chancres, with indurated bases, situated on the right labium externum.

From an unmarried woman, æt. 36, who died in the Pennsylvania Hospital of syphilitic ulceration of the larynx. (See Spec. 1462.)

1728.—Labium, showing Fibrous Tumor.

The specimen shows a rounded tumor, about two inches and a half in diameter, of dense fibro-cellular structure, attached by a thin pedicle to the right labium externum.

Case of a young colored woman, æt. 20, who had noticed the tumor growing for several years.

Presented by Dr. T. G. MORTON.

1730.—Mamma, showing Fatty Tumor.

The specimen shows a slightly lobulated tumor, about two inches in diameter, of a fatty character, which was removed from a woman, æt. 40, in the Pennsylvania Hospital. She made a good recovery.

1733.—Mamma, showing Carcinoma.

The nipple is retracted, and the entire gland flattened, contracted, and converted into a dense scirrhus mass.

Removed from a patient in the Pennsylvania Hospital. No history.

1734.—Mamma, showing Carcinoma.

The gland is large, and, on section, presents a firm medullary appearance. No ulceration has occurred; but about an inch from the nipple, and just below the surface, there is a patch of softening nearly an inch in diameter. The nipple is not much retracted. The attachments of the gland are much thickened and very dense.

Removed from a woman, æt. 40, in the Pennsylvania Hospital. The tumor had been growing for many months, but after its removal she made a good recovery.

1735.—Mamma, showing Carcinoma.

The gland has been dissected away so as to show the tumor, which was imbedded in its substance. It is rather more than an inch in diameter, and tightly adherent to the skin, and, on section, presents a firm medullary character, with numerous trabeculæ of fibrous tissue. The more superficial

portion of the mass has undergone softening, so that a small pseudo-cyst has been formed.

Removed by Dr. Edward Hartshorne, May 11, 1863, from a woman *æt.* 45, a patient in the Pennsylvania Hospital. The tumor had been growing for several months, but had caused no pain.

1736.—Mamma, showing Epithelioma.

The specimen shows a rounded, flat, ulcer-like surface about three inches in diameter. Its edges are in places quite flat, in others slightly elevated. Its surface is partly composed of prominent rounded nodules, but in other places is but slightly roughened by soft filamentous projections.

Removed from a female patient in the Pennsylvania Hospital. No history.

1737.—Cast of Mamma, showing Carcinoma.

The breast is much enlarged and nodulated. The nipple is retracted, and surrounded by superficial ulceration; and about one inch external to it there is a deep cancerous ulcer, with thickened, everted edges. The axillary glands are also seen to be involved.

Presented by Dr. T. G. MORTON.

1744.—Cystic Disease of Chorion.

The specimen shows a vast number of oval vesicular bodies, varying in size, when distended, from a pin's head to a third of an inch in diameter; of a clear, pinkish color; united together, in the line of their long axis, by delicate fibrous filaments, thus forming strings several inches in length. Microscopically examined, they contained granular matter, some hæmatin, and a few nucleated cells, but there could no longer be seen a distinct and complete lining of cells.

The specimen was discharged by a married woman, *æt.* 40, who had had very numerous children and miscarriages. She believed herself to be about four months advanced in pregnancy, when she aborted and discharged this mass.

Presented by Dr. W. PEPPER.

1745.—Cystic Disease of Chorion.

The specimen exhibits a large mass composed of an infinite number of vesicles with delicate walls. Their size varies from a merely perceptible point to a quarter of an inch in length. In many instances they are seen to spring directly from the walls of adjacent vesicles, but in others they are connected by long, delicate, fibrous threads. Most of them are highly translucent. The mass was discharged from the uterus of a pregnant woman.

Presented by Dr. T. G. MORTON.

DESCRIPTIVE LIST

OF

THE SPECIMENS ADDED TO THE HOSPITAL
MUSEUM DURING 1868.

By WILLIAM PEPPER, M.D., CURATOR.

BONES.

1007. *Vertebræ*, showing absorption from pulsatile pressure.—The specimen shows the bodies of the two last dorsal vertebræ deeply eroded upon their anterior surface from the pressure of an aneurism of the aorta, just as it passes through the diaphragm. The cells of the cancellated structure are exposed, but there are no osteophytes nor signs of inflammatory reaction.

Case of a patient in the Pennsylvania Hospital. The aneurism was about 3 inches long by 2 inches in width, and had existed for at least more than one year. At the autopsy, the posterior wall of the sac was in part deficient, so that the blood was in contact with the bone.

1043⁵. *Skull*, showing punctured fracture.—The specimen shows an irregular hole, about $\frac{1}{2}$ inch in diameter, in the right occipito-parietal suture.

Case of a man admitted to the Pennsylvania Hospital, injured by the falling of a sharp-pointed instrument upon his head from a considerable height. The small fragment of bone was forced into the brain. Death soon resulted.

1043¹⁰. *Skull*, showing fracture of parietal bone.—The specimen shows a compound fracture of the left parietal bone, close to the sagittal suture. A rectangular opening has been

formed, about 1 inch long by $\frac{1}{2}$ inch wide, from the left posterior angle of which a fissure extends into the parietal bone.

Case of a patient in the Pennsylvania Hospital.

1045^b. *Fractured Fragment of Parietal Bone removed by Trephining.*—The fragment is irregularly round, and about $1\frac{1}{4}$ inch in diameter. The disc removed by the trephine is fastened in position. The fragment was subsequently removed by the elevator and forceps.

Case of Richard Sexton, æt. 13, admitted to Pennsylvania Hospital, April 13th, 1868, having suffered compound fracture of right parietal bone with loss of brain-substance. Dr. A. Hewson removed this fragment, and for some time the case did well, though a large fungus cerebri* formed in ten days. Ultimately, however, he became paralyzed upon the left side, and died comatose, June 30th, 1868. At the autopsy, a large abscess was found beneath the fungus cerebri, surrounded by extensive softening. (See Specimen, No. 1232.)

* See Photograph.

1114. *Innominate Bone*, showing fracture of pubis.—The specimen shows a slightly oblique fracture of the horizontal ramus of the pubis $\frac{3}{4}$ ths inch in front of the acetabulum, and of the ascending ramus about its junction with os ischium.

Case of a man admitted to Pennsylvania Hospital, having been run over by a heavily laden cart.

1140^b. *Femur*, showing united fracture.—There has been an oblique fracture in the middle third of the right femur, which has united, with some shortening, and marked, though not extreme, anterior angularity. The fractured ends have rounded off nicely, but there are two or three small fistulous openings leading from interior of the shaft at seat of fracture.

Presented by Dr. Wm. Pepper, to whom it was given by a daughter-in-law of Dr. Benjamin Rush, who formerly owned it.

1071. *Scapula*, showing osteo-enchondroma.—The specimen shows a mushroom-like growth springing from the venter of the right scapula. The tumor has a broad sessile attach-

ment and thick overhanging edges; it measured $1\frac{1}{2}$ inches in its greatest, and about 1 inch in its lesser, diameters, and was elevated about 1 inch above the surface of the bone, which seemed of healthy character. The growth consisted of very dense bone, with an outer layer of pinkish translucent cartilage, with crowded loculi, and shrivelled, grotesquely irregular nuclei. On section, the pedicle appeared to be osseous in structure, while the expanded head was partly osseous and partly calcareous, overlaid, as before stated, by a thin layer of cartilage. The osseous structure was cancellous in character, and of a reddish hue, while the calcified portion was of a dull white color, and very dense and hard. The marrow cavities, which were abundant and large, contained a reddish gelatinous material, consisting of granular fat, free oil globules, blood corpuscles, and irregularly rounded and oval granular nucleated cells. When the bony structure was examined under the microscope, the bone corpuscles were found to be small and crowded, and the canaliculi indistinct. The calcareous matter showed amorphous highly refracting mineral particles, with no true osseous tissue.

Case of a colored boy, æt. 16 years, who died in the Pennsylvania Hospital from general tuberculosis. (Dr. George Pepper, Proc. Path. Soc.; Amer. Jour. Med. Sciences, April, 1868, p. 400.)

1170⁵. *Compound Fracture of Tibia, united.*—The specimen shows the effects of an oblique fracture of the tibia, beginning one inch below the tuberosity, and running up into joint on its outer side. Union has occurred with extreme shortening, and internal displacement of the upper fragment, which rests upon the inside of the shaft of the tibia, $1\frac{1}{2}$ inches below the head of the fibula. The lower end of the upper fragment is rounded off, and presents an abundant growth of leafy osteophytes. The lower fragment presents a cleft running down several inches, in which there is a large partially detached sequestrum. The entire shaft of the tibia, down to within 2 inches of its lower extremity, is covered with a thick growth of warty nodulated osteophytes. There has also been a small fragment chipped off, which is

adherent to the head of the fibula. The surface of the sequestrum, which is dead white and smooth, contrasts markedly with the other fractured surfaces.

Case of Thomas Mulligan, admitted to Pennsylvania Hospital, October 26th, 1867, with compound comminuted fracture of tibia, resulting from a severe accident in a coal mine. Extensive necrosis and suppuration followed, and in March amputation was performed by Dr. A. Hewson through the knee-joint, the articular lamina of the condyles being sawn off, and the patella turned down. There was prolonged suppuration after the operation, but ultimately patient recovered with a good stump.

1073^s. *Central Necrosis and Suppuration of Head of the Humerus.*—The head of the bone is hollowed out so as to form a shell less than $\frac{1}{2}$ inch thick, surrounding a cavity nearly 1 inch in diameter, which contained a large porous cancellated sequestrum, and fetid pus. The outer compact lamina of the head is to a great extent destroyed, and the head itself has become entirely separated from the shaft, at the surgical neck. The shaft is also diseased; the compact structure is deeply eroded over a triangular space on the external aspect of the bone, extending four inches below line of separation from the head. The eroded surface is depressed from $\frac{1}{2}$ to 1 line below surrounding surface, is dead white and irregular from presence of numerous little pits. There are also here and there small islets, where the compact structure retains its original thickness, though the outer surface is porous and friable, and separation is evidently going on from the deeper lamina. These appearances have clearly resulted from the separation of the periosteum, the vitality of the inner lamina of the compact structure being retained.

Case of Francis McKeon, a stonemason, æt. 51, admitted to Pennsylvania Hospital, November 7th, 1866, with large axillary aneurism, for which Dr. T. G. Morton ligated left subclavian on November 14th. Suppuration of the tumor followed, and hemorrhage occurred on 43d day, and ten times in next 13 days, ceasing on ligation of subscapular artery. Violent hemorrhage again occurred on 67th day, and arm became gangrenous from upper third of humerus and was cut off; and subsequently the remainder of humerus was removed in condition above described. The patient made a good recovery, and was discharged

March 9th, 1867, 115 days after the ligation. (Dr. Thos. G. Morton, Pennsylvania Hospital Reports, vol. i, p. 203.)

NERVOUS SYSTEM AND ORGANS OF SPECIAL SENSE.

1240^s. *Tumor (Myeloid?) of the Orbit, Antrum, etc.*—The specimen shows the orbit filled with a lobulated, somewhat granular growth, which completely distends it, causing bulging upward of the orbital plate of the frontal bone; it has, also, forced its way into the nasal passages, and the zygomatic fossa. It also extended back through the optic foramen, but did not involve the cerebral mass. On section, its tissue was in many places opaque, dull yellowish-white, and soft from advanced fatty degeneration; in others it was whitish, with a slight reddish tinge from vascularity, or presented patches of marked red color. Upon scraping the cut surface, a considerable amount of cancer-juice was obtained; microscopically it presented a very great number of cells, uni- or multi-nucleated, of varied sizes and shape.

Case of Miss —, a teacher in the Blind Asylum, æt. 31, who became blind at the age of 18 or 19 years, from development of a large tumor which projected into the nasal passages, whence a considerable portion was removed by Dr. Mütter in 1856. It returned, however, in about 11 years, extending into the left orbit, and pressing the eyeball outwards and forwards. In 1867, Dr. Morton raised a skin flap at outer canthus, broke through malar bone and inferior rim of the orbit, and cleaned out the orbit, finding the tumor extending into the antrum, the zygomatic fossa, and nasal cavities. The tumor then removed was variously colored, in places flesh-like and pinkish, and succulent; in others, red and crimson. The stroma was in places merely loosely fibrous, whilst in others, it exhibited a remarkable specimen of “dendritic vegetation.” The cells varied greatly, some being typical fibre-cells, caudate cells, oval and rounded cells of large size, with one or two nucleolated nuclei; besides these there were abundant very large cells, caudate, tapering, or flask-shaped, which contained 3, 4, 6 or more nuclei. From the clinical history and microscopic appearances, the tumor was classed as a myeloid growth. The growth recurred in some months, and became a fungous sloughing mass. She died in about 8 months from last operation. (Presented by Dr. Thomas G. Morton.)

1252. *Congenital Sacral Tumor*, containing foetal structures.—The tumor, after evacuation of several cysts, weighed

2½ pounds, and measured 8½ inches in its greatest length, by 6 inches in its widest part; it is irregularly oval, with three large lobes, fused together so as to be separated by shallow depressions at one end, while at the other the mass becomes thinner, and presents an irregular projection terminating in a well-developed hand. The outer surface of the tumor is invested by skin, which is reflected at the line where it met the skin of the living child, so as to form a closed sac, which contained thick, ill-smelling sebaceous matter, with many short, thin, light-colored hairs; it was this sebaceous matter which gave the rounded contour noticed before removal. The skin investing the tumor is white, pliable, and in all respects healthy; in places there are delicate hairs growing from it. The fingers are furnished with fully developed nails, which have indeed grown so as to project beyond their ends. The back of the hand projects upwards, and the fingers, five in number, towards the left side; the three on the ulnar side are normal, but the two on the radial side, the thumb and forefinger, are united as far down as the middle of the first phalanx, and the thumb appears more like a little finger. Upon dissecting the hand, however, which was most carefully done by Dr. Hunter, the bones of the fingers and metacarpus are seen to be normal; those of the carpus are considerably consolidated, but there is mobility between the carpus and forearm. The bony structure of the upper extremity runs deeply into the substance of the tumor, but it is impossible to recognize the separate bones, which are entirely rudimentary and coalesced; at the upper end they articulate with a bony fragment, which somewhat resembles part of a sternum. The flexor tendons can be traced from a short distance above the carpus, running down under the capsular ligament to be inserted into the phalanges. No nerves or vessels were found in connection with this rudimentary arm. A short distance from this, a small square piece of cartilage was found. In cutting into the substance of the mass, which was chiefly composed of granular fat with excess of connective tissue, two sacs, lined with a serous-looking membrane and containing a small amount of slightly

viscid fluid, were opened. One of these is a single, smooth-walled sac, and possibly represents the pleural cavity. The other, separated from this by a thin fibrous partition, presents two cavities, divided by a perforate septum, and has also two short blind processes leading from it: it seems probable that this represents the heart; no epithelium could be detected upon the inner surface of these sacs. Two of the three large lobes at the other end of the mass are composed entirely of solid, somewhat granular fat. The third presents also a solid fatty part, but, partially surrounding this, is a closed sac, with a serous-looking lining membrane, and with several small translucent nodules springing into it from the adjoining solid portion; upon puncturing two of the vesicle-like nodules, a translucent viscid substance escaped, which, on microscopic examination, was found to contain nerve-tubes and drops of myelin. This entire lobe is surrounded by a thick fibrous capsule, and probably represents the cephalic extremity.

Case of a vigorous female child, æt. 9 months, who, at time of birth, presented an oval tumor, about the size of an Havana orange, in the sacral region. It measured at that time $10\frac{3}{4}$ inches around its base of attachment, and $12\frac{3}{4}$ inches in its greatest circumference. The tumor was recognized by Dr. Eshleemann, the accoucheur in attendance, to have foetal contents, though the diagnosis was somewhat uncertain. It grew rapidly until, when the child was 9 months old, it measured 24 inches in circumference, and 19 inches around the base. The growth was removed by Dr. Thos. G. Morton, an elliptical incision being made, and the tumor carefully dissected from the sacrum and coccyx, to which it was closely adherent; it had also deep and intimate relations with the rectum, which rendered the operation tedious and hazardous. The loss of blood did not exceed $f\bar{3}ij$. There was marked depression following, but the child reacted nicely; but again sank, and died on the following day. No post-mortem examination was allowed. (Dr. Thomas G. Morton, Pennsylvania Hospital Reports, vol. ii, 1868.)

1260. *Supernumerary Fingers*.—The specimen shows two supernumerary fingers, removed, one from each hand, from a female child aged 9 weeks, a patient in the Pennsylvania Hospital. There was also a supernumerary toe on each

foot. All the children in the family presented the same abnormality.

DIGESTIVE SYSTEM.

1291. *Stomach*, showing mammillation and gastric ulcer.—There are two ulcers situated on the lesser curvature, about midway between cardia and pylorus. One of them appears as a linear, somewhat puckered cicatrix; the other, as an oval ulcer, $\frac{3}{4}$ ths inch long, with steep, sharp-cut edges, extending through to the peritoneum. There is a thick layer of organized lymph on the external surface, which formed close adhesion to the pancreas. The mucous membrane over the rest of the stomach presents a marked degree of mammillation.

Case of Bridget Murray, æt. 30, admitted to Pennsylvania Hospital, with general peritonitis, from which she died on the 7th day. At autopsy, peritoneal cavity contained pus, with shreds of corpuscular lymph. The inflammatory lesions were most intense in region of right ovary, which was coated with lymph, and showed a minute perforation from the recent rupture of a Graafian follicle. There was marked cirrhosis of the liver. The woman had suffered for many years from dyspeptic symptoms.

1366. *Appendix Vermiformis*, showing perforation.—The specimen shows the appendix and a part of the cæcum. The appendix is contracted, and its walls thickened. The mucous membrane presents numerous minute apertures, the enlarged openings of follicles. Near its free extremity, there is a quite large, shallow ulcer, coated with a layer of false membrane, and presenting near its centre a small perforation. The appendix is invested externally by a layer of organized lymph.

Case of B. M., æt. 5, a well-grown child, born of healthy parents. About one year before death, she had a severe attack of typhlitis, from which, however, she recovered, and appeared to regain her previous health. The following summer, without any appreciable cause, she was attacked with diarrhoea of a mild type, but, after a few days continuance, the symptoms of acute diffused peritonitis appeared, and proved rapidly fatal. At the autopsy, recent suppurative peritonitis was found extending over lower segment of abdomen. In the right iliac fossa

there were evidences of chronic inflammation. The omentum was tightly adherent to that portion of the abdomen, and the folds of intestine bound together so as to surround the appendix. In immediate connection with the perforation of the appendix was a small abscess. There was a concretion, consisting of 3 or 4 small seeds (the size of raspberry seeds) embedded in inspissated mucus, lying in the appendix, near its free end. (Presented by Dr. J. Forsyth Meigs.)

1427. *Spleen*, enormously enlarged from cardiac disease.—The specimen shows the spleen enormously enlarged, being 9 inches long by 6 inches wide. The capsule is slightly thickened, though it still shows some of its usual puckering. The tissue is quite firm, the trabecular structure being increased, and pulp dark.

Case of McKinley, who died in the Pennsylvania Hospital from effects of extreme mitral and aortic disease.

1431. *Spleen*, showing results of embolism.—The spleen is considerably enlarged, being about double its natural size; its surface nodulated; the capsule opaque and thickened, and yellowish in patches, which are depressed below surrounding surface. On cutting the organ open, several large patches of homogeneous, yellowish tough substance were found. One of them was seated near the hilum, another in the centre of the organ, and a third, which was wedge-shaped, and more than an inch in diameter, immediately beneath the capsule. They were almost encapsulated, and presented no trace of central softening. On microscopic examination, they were found to consist merely of the splenic elements in a state of atrophic fatty change.

Case of R. K., æt. 38, admitted to Pennsylvania Hospital April 8th, 1867, with extensive cardiac disease, the mitral valves especially being the seat of large vegetations (see Specimen, No. 1509^a). There were no embolic patches elsewhere. (Dr. William Pepper, Proc. Path. Society; Amer. Jour. Med. Sciences, January, 1868, p. 118.)

RESPIRATORY SYSTEM.

1460^b. *Larynx*, showing follicular ulceration.—The mucous membrane throughout the larynx, below the vocal cords, is

reddened, and presents very numerous small shallow oval ulcers, in places confluent. The under surface of the epiglottis cartilage presents a few similar ulcers. The mucous membrane is entirely destroyed over the left inferior vocal cord, but on the others is merely reddened, with a few small ulcers.

Case of David Deens, æt. 32, admitted to Pennsylvania Hospital February 27th, 1868. There was very little difficulty in deglutition, but the voice was whispering. These laryngeal symptoms had supervened 7 months after the development of tubercular disease of the lungs. He died from pneumothorax March 16th, 1868.

1460¹⁰. *Larynx*, showing tubercular ulceration.—The epiglottis cartilage has been entirely destroyed by ulceration, so that a deep excavated ulcer, with granulating bottom, extends from the base of the tongue to the upper vocal cords, which are also almost entirely destroyed. The mucous membrane throughout the larynx presents very numerous small oval ulcers, which in places have coalesced, forming broad shallow ulcers.

Case of David Patton, Irish, æt. 39, admitted to the Pennsylvania Hospital February 8th, 1868, having suffered with tubercular disease of the lungs for one year. Laryngeal symptoms began four months afterwards, with slight hoarseness. There is no evidence of his ever having had syphilis. Laryngoscopic examination showed the epiglottis to be enormously thickened, with points of ulceration on its free border. The true and false vocal cords were seen to be swollen and ulcerated. At first, swallowing was easy, but between March 5th and March 20th the epiglottis became detached by ulceration, and deglutition became very difficult. Death occurred March 20th, 1868.

1473⁸. *Lung*, compressed and carnified.—The specimen shows the right lung remarkably condensed, and reduced in size from compression. The pleura is thickened and roughened by irregular layers of lymph. The upper lobe was slightly crepitant, and larger than the other two together. The middle and lower lobes were entirely carnified and airless; the former especially being so contracted as to form a conical body $2\frac{1}{2}$ inches long by less than 1 inch in transverse diameter at its base.

Case of a woman who died in the Pennsylvania Hospital, worn out by suffering and exhaustion from an enormous ovarian tumor, which was very densely adherent to all surrounding parts, and pressed the diaphragm upwards so forcibly as to prevent the expansion of the lungs, more especially of the right one, though the left also was compressed.

CIRCULATORY SYSTEM.

1507. *Heart*, showing effects of acute endocarditis.—The heart is not much altered in size; its vertical diameter is $5\frac{1}{2}$ inches, its transverse 4, its antero-posterior $2\frac{1}{2}$; no material increase in thickness. The auricular surface of the mitral valves, especially near their free edge, presents numerous small low nodular vegetations, giving a fringed appearance. There were also some vegetations around the insertion of the leaflets. The right side of the heart was decidedly fatty.

Case of Ellen Boyle, Irish, æt. 28, admitted March 11th, 1868, with acute articular rheumatism, and a slight mitral murmur. The rheumatism was improving, when she contracted typhus fever, from which she died, April 7th, 1868. (Dr. Da Costa, Pennsylvania Hospital Reports, vol. ii, p. 9, 1868.)

1509^s. *Heart*, showing mitral disease.—There is marked eccentric hypertrophy of the left ventricle. The aortic valves are somewhat thickened and incompetent, but do not present any vegetations. The anterior leaflet of the mitral valve is much thickened, and presents on its free margin a large patch of vegetations, one of which forms a thin pendulous body $\frac{1}{4}$ th inch long. There are some short, broken-looking vegetations on the posterior leaflet; but hanging by a thin pedicle, from the surface of one of the papillary muscles, is a very large ovoid vegetation, at least $\frac{1}{2}$ inch in diameter. The right cavities present a comparatively slight degree of eccentric hypertrophy, their valves being quite healthy.

Case of Robert Killen, æt. 38, admitted to Pennsylvania Hospital, April 8th, 1867. He had suffered for several years with severe malarial disease, and occasional attacks of rheumatism. The heart's action was very confused and rapid, and there was apparently a want of synchronous action of the various cavities. The heart-beats were more frequent than the radial pulse, which was also irregular and intermittent. The impulse was extended and heaving; the area of cardiac

dulness increased; a murmur existed, moderately harsh, presystolic, and heard most distinctly near the nipple, to the left of the sternum, about the third interspace. For the past year he had noticed increasing dyspnoea, with intermitting oedema. At the autopsy, marked nutmeg congestion of the liver was found; the spleen was much enlarged, and presented several large embolic patches (see Specimen, No. 1431). (Dr. William Pepper, Proc. Path. Soc.; Amer. Jour. Med. Sciences, January, 1868.)

1566. *Axillary Artery*, showing results of ligation.—The specimen shows the ligature still in place; and also a firm clot, about $1\frac{1}{2}$ inches long, which extended upwards from seat of ligation.

Case of a man who died in the Pennsylvania Hospital from exhaustion, 4 days after amputation of arm.

1567. *Aneurism of the Profunda and Femoral Arteries*.—The femoral artery has been previously ligated at the apex of Scarpa's triangle; and corresponding to this point, the artery has been entirely obliterated for at least $1\frac{1}{2}$ inches, and converted into a fibrous cord. Below this, the vessel was dilated and much thickened, the inner coat being puckered and thrown into transverse folds, and in places atheromatous. Above the obliterated portion, the artery for some distance was healthy, but, opposite the profunda, the anterior portion was much dilated, and formed a part of the front and inner wall of the aneurism. The dilatation extended down the profunda for $1\frac{1}{2}$ inches, involving its entire calibre, so that it formed the outer and under parts of the sac. The aneurismal disease had evidently begun at the origin of the profunda, and implicated a part of the anterior wall of the femoral artery. The sac was to a great extent filled with laminated clots.

Case of George Rowland, æt. 55, colored, admitted to Pennsylvania Hospital, August 12th, 1867, presenting a pulsating tumor at and just below Poupart's ligament. Fifteen years previously, the femoral artery had been successfully ligated for popliteal aneurism by Dr. G. W. Norris in the Hospital. In spring of 1867, after a severe strain, a pulsating tumor appeared in groin, and rapidly increased in size. The external iliac was ligated by Dr. T. G. Morton, but patient died on third day from peritonitis. (Dr. Thomas G. Morton, Pennsylvania Hospital Reports, vol. i, p. 205.)

GENITO-URINARY SYSTEM.

1591⁵. *Kidney*, showing cystic disease.—The specimen shows a large thin-walled cyst, about $2\frac{1}{2}$ inches in diameter, occupying one extremity of the kidney. On removal, the sac was distended with a clear watery fluid. On laying open the kidney along its convexity, the cyst is found to encroach upon the secreting structure, so that at least one-fourth has disappeared. The inner surface of cyst is smooth, and, at one point, probably corresponding to original position of a calyx, there is a little depression. There is, however, no communication between the cyst and the pelvis. On stripping off the capsule of the kidney, it is found to become thinned out over the cyst, and finally to become inseparable from the cyst-wall. The renal artery gives off quite a large branch, which enters the kidney just at the beginning of the cyst, and furnishes branches which ramify over the cyst-wall. The rest of the kidney is of normal size, and appears quite healthy.

Case of a man in the Pennsylvania Hospital, who had presented no symptoms of renal disturbance.

1642. *Urinary Bladder*, distended with coagulum.—The specimen shows the bladder much distended, and containing a very large, firm, spherical clot, moulded to the interior, and presenting at its centre a small cavity, which contained turbid urine. This cavity communicated with the urethra, and was evidently the channel of escape for the urine.

Case of Robert S., æt. 26, admitted to the Pennsylvania Hospital, April 7th, 1867, having been stabbed in the left lumbar region with a sharp-pointed, narrow-bladed knife. The urine became very bloody, and soon contained a number of blood-casts from the renal tubules, which were replaced, as the blood diminished, by epithelial and granular casts. The urine, however, remained highly albuminous. Pleurisy supervened on the tenth day, and death occurred on twenty-third day. At autopsy, extensive empyema of left side was found. The right kidney was healthy; the left presented a deep wound, which was almost entirely healed. (Dr. William Pepper, Proc. Path. Society; Amer. Jour. Med. Sciences, July, 1868, p. 150.)

1645^s. *Urinary Bladder*, showing rupture.—The specimen exhibits a slit-like rupture, $\frac{3}{4}$ ths inch long, in the posterior wall, a little above the bas fond.

Case of a man, admitted to Pennsylvania Hospital, having been run over by a heavy cart, while the urinary bladder was distended, the wheel passing directly over it. Death occurred from acute peritonitis in 24 hours; and, at autopsy, urinous infiltration of pelvic cellular tissue was found, and bloody urine free in the peritoneal cavity.

1686. *Ovary*, showing ruptured follicle.—The specimen exhibits the right ovary laid open. The inner part of this organ was much softened, and its surface coated with partly organized lymph. On careful examination, the orifice of a ruptured Graafian follicle was found, which had not yet closed, and admitted a fine probe. The cavity of the follicle did not apparently contain any blood or inflammatory product. On making a section of the ovary, a second cyst, about $\frac{1}{2}$ inch in diameter, was found. In the right broad ligament, close to the ovary, was a little cyst, about $\frac{1}{4}$ inch in diameter, attached by a thin pedicle to the end of the Fallopian tube. The morsus diaboli of the right Fallopian tube was intensely congested, and somewhat swollen, but this, as well as the other Fallopian tube, was patulous. The cavity of the uterus was healthy; the cervical cavity, however, presented follicular disease, but no obstruction existed in its calibre.

Case of Bridget Murray, æt. 30, admitted to Pennsylvania Hospital, December 3d, 1867. She had suffered with severe dyspeptic disturbances; and about 6 days before admission, immediately after cessation of menstruation, and also after exposure to damp and cold, she was attacked with nausea and vomiting, but did not go to bed until December 1st, 1867. Her symptoms rapidly aggravated, and she died December 4th, 1867, on seventh day of attack. At the autopsy, the peritoneal cavity was found to contain about Oss. of turbid fluid, with flocculi of yellowish lymph. The evidences of inflammation were far most intense in the right ovarian region. The liver was markedly cirrhotic. There were also two large gastric ulcers, neither of which had actually perforated (see Specimen, No. 1291).

1654^s. *Testis*, showing strumous sarcocoele.—The specimen shows the right testicle almost entirely healthy, but the epi-

didymis is very greatly enlarged, the cavity of the tunica vaginalis obliterated, and the subcutaneous tissue of the scrotum thickened and infiltrated. On making a section of the epididymis, its structure presents a coarse fibrous stroma, infiltrated with yellowish aplastic lymph.

Case of a young man, admitted to the Pennsylvania Hospital with enlargement of the right testicle, of one year's duration. He was married, and had healthy children; had never suffered from syphilis. The gland was removed by Dr. Thos. G. Morton.

1687^s. *Ovary*, showing cystic disease, with hemorrhage.—The specimen shows the right ovary laid open, showing two quite large cysts, one of which contained clear serum, while the other contains a firm clot, about $\frac{3}{4}$ ths inch in diameter.

Case of a woman who died in the Pennsylvania Hospital, having presented no symptoms of ovarian disease.

1692^s. *Exogenous Ovarian Cysts*.—The specimen exhibits a number of small whitish thick-walled cysts. They are mostly oval in shape, and vary in size from $\frac{1}{2}$ of an inch to $1\frac{1}{2}$ inches in their long diameter. In several instances small cysts can be seen growing exogenously from the surface of the larger ones. The contents of these cysts varied from a light-colored, slightly viscid, serum, to a reddish gelatinous substance. The specimen also shows a quantity of thick, ropy, gelatinous matter, which has escaped from still larger cysts.

Case of an elderly lady who had suffered with ovarian dropsy for many years. Paracentesis was performed by Dr. Rhoads, but with evacuation of but little fluid, owing to its ropy character. Death occurred soon afterwards, when it was found that the fluid was to a great extent free in the peritoneal cavity. The left ovary was principal seat of disease, and presented a large cystic sarcomatous growth, from the surface of which vast numbers of small secondary and tertiary cysts, such as are seen in the specimen, sprang exogenously. In most instances they were attached by their pedicles, many of which had become broken, so that large numbers of these cysts floated free in the peritoneal cavity. There were also large cysts, many of which had ruptured, filling the abdomen with quarts of gelatinous fluid. (Presented by Dr. Rhoads.)

1695^s. *Scirrhus of Ovary*.—The specimen shows the left

ovary laid open. It formed a rounded, very firm, tumor, about $2\frac{1}{2}$ inches in diameter, adherent to the pelvic wall, uterus and bladder inferiorly, but free superiorly and posteriorly. The capsule of the ovary was thickened and too adherent. On section, it presents a dense, almost homogeneous, wall, about $\frac{3}{4}$ th inch thick, of yellowish-white color, with a central cavity 1 inch in diameter, containing a puriform fluid, and with irregular projections from the wall into it. On cutting into these, the tissue presented a firm, succulent, reddish appearance. No trace of the ordinary structure of the ovary was found. The wall was softening, and almost perforated at the lower part, where it was adherent to the uterus. Microscopic examination showed a dense fibrous stroma, not forming loculi, thickly studded with granular oil, as though undergoing fatty change, and a moderate number of rather small, singly nucleated granular cells.

Case of S. S., æt. 29, married, but sterile, belonging to a healthy family. For one year before death had been in poor health, emaciating and suffering from constant pain in lower part of abdomen, with frequent desire to stool. The attack began with severe pain in left ovarian region, and in a short time a firm small tumor could be detected above Poupart's ligament on left side. There was also extreme dysuria.

Ten days before death, marked mental disturbance supervened, which soon amounted to entire unconsciousness, without any positive paralysis, strabismus, or alteration of pupils. Pulse very frequent.

At the autopsy, a small cancerous tumor was found embedded in the left hemisphere, at the junction of anterior and middle thirds, on its inner aspect, just above the corpus callosum. There were old peritoneal adhesions in upper part of abdomen. The left suprarenal capsule contained several small scirrhous nodules. Uterus of natural size. The cervix was much indurated, cutting with difficulty, and shrieking under the knife. Microscopic examination, however, revealed only dense fibrous tissue. (Presented by Dr. William Pepper.)

1708^s. *Large Uterine Fibroid Tumor*, pediculated.—The specimen shows a very large dense fibroid tumor, somewhat pear-shaped, measuring about 12 inches in its greatest diameter, and weighing rather more than 12 pounds. It was attached to the fundus of the uterus by a short pedicle, 2 inches thick. The peritoneum invests it throughout, and

is, in places, opaque and thickened. On section, its structure presents the ordinary character of fibro-muscular tumors of the uterus. There are also large vascular sinuses traversing its structure, or running immediately beneath the peritoneal covering. There were scarcely any adhesions between the surface of the tumor and surrounding parts.

Case of Sarah Robaugh, æt. 23 years, admitted to the Pennsylvania Hospital, May 9th, 1868. The tumor had been developing for several years, and the patient's strength was failing so rapidly that Dr. Agnew removed it on May 28th, 1868, by a large abdominal incision. The pedicle was ligated, and, after being divided, cauterized by the actual cautery. Very little blood was lost, but she sank, apparently from nervous shock, and died in 24 hours.

1711^d. *Fibro-cystic Polyp from Cervix Uteri*.—The specimen exhibits a cystic polyp, removed by Dr. Ellwood Wilson, with the écraseur, from the cervix uteri. Its form is an irregularly lobulated disc, with a central slit-like orifice, which appears to have corresponded to the os uteri. There is, however, a roughened surface at one extremity, which was probably the seat of organic connection. The polyp was of grayish color, and presented numerous small cysts, containing clear gelatinous contents, and which were evidently distended follicles. The intervening stroma presents a closely fibrous structure.

(Presented by Dr. Ellwood Wilson.)

1717^s. *Uterus, showing cancer of cervix*.—The specimen shows complete destruction of the inferior segment of the uterus from encephaloid cancer, which has involved the vaginal walls so completely that on endeavoring to remove the organ it tore loose readily from its vaginal attachment. The inferior surface of the uterus presents a coarsely granular appearance, and, on microscopic examination, the lower portion of the organ was found infiltrated with cancerous elements.

Case of a lady, æt. 47, of good family history, and previous general good health. The first symptoms were noticed more than a year before death, and from that time onwards she suffered severe pain, occasional

difficulty in urination, and constant fetid discharge from the vagina. There was cystic disease of the left ovary, but the remaining abdominal viscera were merely soft and fatty, no other cancerous deposits being found.

1718. *Uterus*, showing cancer of fundus.—At the autopsy, no lesion was found in any other organ. The uterus was retroverted, but quite movable; the peritoneal investment smooth and glistening; the body of the organ increased to about double the normal size, but exceedingly flaccid and relaxed. Upon cutting through the anterior wall the uterine cavity was found enlarged, and the cervix and os were so much dilated that it was impossible, from examining the mucous surface, to detect the line of insertion of the vagina, the cervix being entirely obliterated. There was, however, no disease of the uterine walls, excepting at a point on the posterior wall about three-fourths of an inch from the fundus, where a mushroom-like growth, with a broad sessile base, projected into the cavity. This mass, which was the stump of a tumor previously removed, was not more than $\frac{3}{4}$ ths inch in height, of a dirty gray color, and lax, doughy consistence. On section, its tissue was of a soft, fleshy character, and of a delicate pinkish-gray color. Toward its base it became blended with the tissue of the uterine wall. There was, however, no induration or thickening of the uterine tissue, even immediately beneath it. The mucous membrane of the uterus was much stained and discolored, but not otherwise abnormal.

Microscopic examination showed the growth to be composed of very numerous, small, fusiform, nucleated cells, interspersed with which were many quite large, irregularly shaped cells, with single large nuclei. These cells were for the most part round or oval. The tissue was undergoing fatty degeneration, and much free oil, granule-cells, and plates of cholesterin were present.

Case of a married woman, æt. 35, the mother of 3 children, the youngest being 3 years old. Since the birth of this child she has had six severe floodings, the last about 4 months before her death, which she regarded as miscarriages. Dr. Getchell was called to see her 2½

months after this supposed miscarriage, and found her losing blood rapidly. The hemorrhage was readily stopped, but recurred, and a week afterwards an intra-uterine tumor, the size of a large walnut, was detected springing from the upper segment of the posterior wall. This was so soft that it readily broke down under manipulation, and was extracted piecemeal. Copious and uncontrollable hemorrhages occurred from this time until the date of her death, a few weeks after. (Dr. William Pepper, Proc. Path. Society; Amer. Jour. Med. Sciences, July, 1868, p. 152.)

1727. *Elephantiasis of Vulva*.—The specimen shows an irregularly lobed tumor, about 5 inches long, which branches about the middle, terminating below in two conical portions, the inner of which presents some resemblance to an enormously hypertrophied clitoris. The color of the tumor was deep purplish on removal; its surface covered with closely set nodules. Microscopic examination showed it to consist of fibro-cellular tissue, resulting from hypertrophy of the dermic structure.

Removed after death from an elderly lady. (Presented by Dr. Thos. G. Morton.)

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